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Subj: KC-130T TRAINING AND READINESS (T&R) MANUAL

Ref: (a) NAVMC 3500.14B

Encl: (1) KC-130T T&R Manual

1. Purpose. To revise standards and regulations regarding the training of KC-130T aircrew per the reference.
2. Cancellation. NAVMC 3500.52A
3. Scope. Significant changes in this revision include the following:
  - a. Revision of metrics and standards for aircrew readiness reporting in Chapter 1.
  - b. Removal of all references in Chapters 4 and 5 to enlisted taxiing of aircraft and addresses a right-seat taxi observer syllabus for these chapters.
  - c. Addition of Chapter 7, Crewmaster.
4. Information. Recommended changes to this publication are invited, and may be submitted via the syllabus sponsor and the appropriate chain of command to: Commanding General (CG), Training and Education Command (TECOM), Aviation Training Division (ATD) using standard Naval Correspondence or the Automated Message Handling System plain language address: CG TECOM ATD.
5. Command. This Manual is applicable to the Marine Corps Total Force.
6. Certification. Reviewed and approved this date.

R. C. FOX  
By direction

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CHAPTER 1

KC-130T TRAINING AND READINESS UNIT REQUIREMENTS

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CHAPTER 1

KC-130T TRAINING AND READINESS UNIT REQUIREMENTS

100. VMGR TRAINING AND READINESS UNIT REQUIREMENTS. The goal of Marine Aviation is to attain and maintain combat readiness to support Expeditionary Maneuver Warfare while conserving resources. The standards established in this program are validated by subject matter experts to maximize combat capabilities for assigned Mission Essential Tasks (METs). These standards describe and define unit capabilities and requirements necessary to maintain proficiency in mission skills and combat leadership. Training events are based on specific requirements and performance standards to ensure a common base of training and depth of combat capability.

101. VMGR MISSION. Support the MAGTF Commander by providing air-to-air refueling and assault support, day or night under all weather conditions during expeditionary, joint, or combined operations.

102. VMGR TABLE OF ORGANIZATION (T/O). As of this publication date, VMGR units are authorized:

Squadron

VMGR-234 - T/O #8820A

12 Aircraft  
48 Pilots [32 TPC/16 CP (T2P/T3P)]  
31 TSOs  
25 Flight Engineers  
\*49 Crewmasters

VMGR-452 - T/O #8820B

12 Aircraft  
49 Pilots [33 TPC/16 CP (T2P/T3P)]  
32 TSOs  
25 Flight Engineers  
\*46 Crewmasters

Detachment

6 Aircraft  
22 Pilots [14 TPC/8 CP (T2P or T3P)]  
13 TSOs  
12 Flight Engineers  
\*24 Crewmasters

\* During transition from FM and LM to CM, the VMGR detachment is authorized to fill vacant CM billets with up to 12 FM's and 12 LM's.

103. VMGR SKILLS ABBREVIATIONS. Shading indicates Core Plus/Mission Plus Skills.

CORE SKILLS	
NS	NIGHT SYSTEMS
LRN	LONG RANGE NAVIGATION
TN	TACTICAL NAVIGATION
LAT	LOW ALTITUDE TACTICS
SEC FORM	SECTION FORMATION
DIV FORM	DIVISION FORMATION
IR TR	IR THREAT REACTION
MISSION SKILLS	
ALZ	ASSAULT LANDING ZONE
CPL	CARGO AND PASSENGER LOADING
AAR	AIR-TO-AIR REFUELING
RGR	RAPID GROUND REFUELING
AD	AIR DELIVERY
DASC(A)	DIRECT AIR SUPPORT CENTER (AIRBORNE)
CORE PLUS SKILLS	
TN	TACTICAL NAVIGATION
RF TR	RADAR THREAT REACTION
DT	DEFENSIVE TACTICS
AD	AIR DELIVERY
MISSION PLUS SKILL	
BI	BATTLEFIELD ILLUMINATION

104. VMGR MISSION ESSENTIAL TASK LIST (METL)

1. Core METL. The METL is a list of specified tasks a VMGR squadron is designed to perform. Core METs, standardized by type unit, are drawn from the Marine Corps Task List (MCTL) and are used for unit readiness. Core Plus METs are additional METs that are theater specific and/or have a low likelihood of occurrence. Core Plus METs may be included in readiness reporting when contained within an Assigned Mission METL. An Assigned Mission METL consists of only the selected MCTLs (drawn from Core and Core Plus METs) necessary for that Assigned Mission.

**Core METL**

MCT 1.3.3.3.2 Conduct Aviation Operations From Expeditionary Shore-Based Sites  
MCT 1.3.4.1 Conduct Combat Assault Transport  
MCT 1.3.4.2 Conduct Air-to-Air Refueling  
MCT 1.3.4.2.1 Provide Aviation-Delivered Ground Refueling  
MCT 4.3.4 Conduct Air Delivery  
MCT 5.3.2.7.2.1 Provide a Direct Air Support Center Airborne [DASC(A)] Platform

**Core Plus MET**

MCT 1.3.4.3 Provide Aviation Delivered Battlefield Illumination

2. VMGR MET Output Standards. MET output standards are the required level of performance a VMGR unit must be capable of sustaining during contingency/combat operations by MET to be considered MET-ready. Output standards will be demonstrated through the incorporation of unit training events. A core capable KC-130T unit is able to sustain the number of sorties listed below on a daily basis during contingency/combat operations. The sortie rates are based on 2.6 hour average sortie duration and assumes > 70 percent FMC aircraft and > 90 percent T/O aircrew on hand. If unit FMC aircraft < 70 percent or T/O aircrew < 90 percent, core capability will be degraded by a like percentage. A core capable unit is able to accomplish all tasks designated in the unit METL from a main base, expeditionary base.

MET Output Standards 12 Aircraft Squadron / 6 Aircraft Detachment			
MCT	MET	OUTPUT STANDARD	
		MAXIMUM DAILY SORTIES*	MAXIMUM MCT SORTIES
MCT 1.3.3.3.2 ALZ	Conduct Aviation Operations From Expeditionary Shore-Based Sites	10/5	10/5
MCT 1.3.4.1 CPL	Conduct Combat Assault Transport		10/5
MCT 1.3.4.2 AAR	Conduct Air Refueling		10/5
MCT 1.3.4.2.1 RGR	Provide Aviation-Delivered Ground Refueling		2** points
MCT 4.3.4 AD	Conduct Air Delivery		6/3
MCT 5.3.2.7.2.1 DASC(A)	Provide a Direct Air Support Center Airborne [DASC(A)] Platform		6/3
Core Plus MET Output Standards			
MCT	MET	OUTPUT STANDARD	
		MAXIMUM DAILY SORTIES*	SORTIES
MCT 1.3.4.3 BI	Provide Aviation Delivered Battlefield Illumination	6/3	6/3

\*A 12/6 plane Mission Capable VMGR Reserve Unit is able to execute 10/5 total overall sorties on a daily (24 hour period) basis during contingency/combat operations.

\*\*The output standard for Aviation-Delivered Ground Refueling is not stated in sorties but on refueling points provided.

105. VMGR MET TO CORE/MISSION/CORE PLUS/MISSION PLUS SKILLS MATRIX. This matrix provides a pictorial view of the relationship between the unit Mission Essential Task (MET) and each Core/Mission/Core Plus/Mission Plus Skill required to perform the MET. Shading indicates a Core Plus MET and corresponding Core Plus/Mission Plus Skill.

VMGR MET TO CORE/MISSION/CORE PLUS/MISSION PLUS MATRIX																			
MCT	CORE SKILLS (2000 PHASE)								MISSION SKILLS (3000 PHASE)						CORE PLUS (4000 PHASE)				
															SKILLS				MISSION PLUS
	NS	LRN	TN	LAT	SEC FORM	DIV FORM	IR TR	ALZ	CPL	AAR	RGR	AD	DASC(A)	TN	RF TR	DT	AD	BI	
MCT 1.3.3.3.2 ALZ	X			X			X	X								X	X		
MCT 1.3.4.1 CPL	X	X	X	X			X		X							X	X		
MCT 1.3.4.2 AAR	X		X		X	X	X			X					X	X	X		
MCT 1.3.4.2.1 RGR	X										X								
MCT 4.3.4 AD	X		X		X	X	X					X			X	X	X	X	
MCT 5.3.2.7.2.1 DASC(A)							X						X			X	X		
Core Plus																			
MCT 1.3.4.3 BI	X						X									X	X		X



106. VMGR CORE MODEL MINIMUM REQUIREMENT (CMMR) SKILLS PROFICIENCY REQUIREMENTS. The CMMR is the optimum number of aircrew to execute each stage of flight as detailed below. The numbers associated with each crew position column reflect the number of proficient aircrew required.

KC-130T CORE MODEL MINIMUM REQUIREMENT (CMMR)						
12 PLANE SQUADRON						
CORE SKILL	PILOT	TSO	FE	FM	LM	CM*
NS	18	9	9	9	9	18
LRN	24	12	12	12	12	24
TN	16	8	8	8	8	16
LAT	8	4	4	4	4	8
SEC FORM	16	N/A	8	8	N/A	8
DIV FORM	8	N/A	4	4	N/A	4
IR TR	12	6	6	6	6	12
MISSION SKILL	PILOT	TSO	FE	FM	LM	CM*
ALZ	12	6	6	6	6	12
CPL	N/A	N/A	N/A	N/A	8	8
AAR	16	8	8	8	8	16
RGR	12	N/A	6	18**		18
AD	8	4	4	4	8	12
DASC(A)	N/A	N/A	4	N/A	N/A	N/A
CORE PLUS SKILLS	PILOT	TSO	FE	FM	LM	CM*
TN	4	N/A	N/A	N/A	N/A	N/A
RF TR	6	3	3	N/A	N/A	N/A
DT	4	2	2	2	2	4
AD	4	2	2	2	4	6
MISSION PLUS SKILL	PILOT	TSO	FE	FM	LM	CM***
BI	8	4	4	4	12	16

\* During transition from FM and LM to CM, any FM or LM can substitute a CM number; not to exceed the quantity in the respective FM or LM column and provided requisite Legacy skill training has been completed.

\*\* Three RGR qualified crew members are required per crew, at least one of which shall be a Refueling Supervisor (RS).

\*\*\* One crew member shall be a Quality Assurance Safety Officer.

KC-130T CORE MODEL MINIMUM REQUIREMENT (CMMR) 6 PLANE DETACHMENT						
CORE SKILL	PILOT	TSO	FE	FM	LM	CM*
NS	10	5	5	5	5	10
LRN	12	6	6	6	6	12
TN	8	4	4	4	4	8
LAT	4	2	2	2	2	4
SEC FORM	8	4	4	4	N/A	4
DIV FORM	4	2	2	2	N/A	2
IR TR	6	3	3	3	3	6
MISSION SKILL	PILOT	TSO	FE	FM	LM	CM*
ALZ	6	3	3	3	3	6
CPL	N/A	N/A	N/A	N/A	4	4
AAR	8	4	4	4	4	8
RGR	6	N/A	3	9**		9
AD	4	2	2	2	4	6
DASC(A)	N/A	N/A	2	N/A	N/A	N/A
CORE PLUS SKILL	PILOT	TSO	FE	FM	LM	CM*
TN	2	N/A	N/A	N/A	N/A	N/A
RF TR	2	1	1	N/A	N/A	N/A
DT	2	1	1	1	1	2
AD	2	1	1	1	2	3
MISSION PLUS SKILL	PILOT	TSO	FE	FM	LM	CM***
BI	4	2	2	2	6	8

\*During transition from FM and LM to CM, any FM, or LM can substitute a CM number; not to exceed the quantity in the respective FM or LM column and provided requisite Legacy skill training has been completed.

\*\* Three RGR qualified crew members are required per crew, at least one of which shall be a Refueling Supervisor (RS).

\*\*\* One crew member shall be a Quality Assurance Safety Officer.

107. VMGR READINESS REPORTING. The paragraphs and tables below delineate the minimum aircrew qualifications and designations required to contribute to unit readiness. Chapter 7 of the Aviation T&R Program Manual provides additional guidance and a detailed description of readiness reporting using the Defense Readiness Reporting System – Marine Corps (DRRS-MC) and the Current Readiness program.

1. Combat Leadership requirements for readiness reporting are per paragraph 109.1.

2. Crew requirements for specific missions may be balanced by the experience level of the crew and are at the discretion of the commanding officer. For readiness reporting purposes, the table delineates the minimum crew definition qualifications and designations as well as the number of crews required per MET. Designated instructors may be used to offset specific training deficits when forming crews for readiness reporting. The number of crews formed, using the below minimum standards per crew, capture the readiness capability of a squadron to perform the MET sortie under all light levels and will be compared to the CMMR requirement for crews when reporting readiness.

KC-130T MINIMUM CREW QUALIFICATIONS / DESIGNATIONS REQUIRED FOR MET CAPABILITY							
CORE METS	CREW POSITION					CREWS REQUIRED PER MET (CREW CMMR)	
MCT	PILOT	COPILOT	TSO	FE	CM**	SQD	DET 6
1.3.3.3.2 (ALZ)	MSP, TPC	ALZ STAGE COMPLETE*	MSP	MSP	2 x MSP	6	3
1.3.4.1 (CPL)	N/A	N/A	N/A	N/A	2 x MSP	8	4
1.3.4.2 (AAR)	MSP, TPC	AAR STAGE COMPLETE*	MSP	MSP	2 x MSP	8	4
1.3.4.2.1 (RGR)	MSP, TPC	RGR STAGE COMPLETE*	MSP	MSP	3 x MSP***	6	3
4.3.4 (AD)	MSP, TPC	AD STAGE COMPLETE*	MSP	MSP	3 x MSP	4	2
5.3.2.7.2.1 [DASC(A)]	N/A	N/A	N/A	MSP	2 x MSP	4	2
CORE PLUS METS						SQD	DET 12
1.3.4.3 (BI)	MSP, TPC	BI STAGE COMPLETE*	MSP	MSP	4 x MSP****	4	4

\* Stage Complete is defined as having completed all events for that particular stage but it does not require that the pilot is proficient in those events.

\*\* A FM/LM may replace a CM during the Crew Master transition.

\*\*\* One crew member shall be a Refueling Supervisor (RS).

\*\*\*\* One crew member shall be a Quality Assurance Safety Officer (QASO).

108. INSTRUCTOR REQUIREMENTS. A VMGR squadron should possess the following numbers of personnel with the instructor designations listed in the matrix.

INSTRUCTOR REQUIREMENTS (5000 PHASE)										
DESIGNATION	PILOTS		TSO		FLIGHT ENGINEER		LOADMASTER		CREWMASTER*	
	12 PLANE	6 PLANE	12 PLANE	6 PLANE	12 PLANE	6 PLANE	12 PLANE	6 PLANE	12 PLANE	6 PLANE
BIP	5	3								
TSOI			3	2						
FEI					5	3			5	3
LMI							4	2	4	2
ANI	4	2	4	2	4	2	4	2	8	4
FRSI	3									
LATI	4	2								
NSI	3	1	3	1	3	1	3	1	6	2
WTI	2	1	2	1	2	1	2	1	4	2
DTI	0	0								
FLSE	2	1								

\*During transition from FM and LM to CM, any FM, or LM can substitute for a CM number, not to exceed the quantity in the respective FM or LM column and provided requisite Legacy skill training has been completed.

109. VMGR QUALIFICATIONS AND DESIGNATIONS

1. CMMR Combat Leadership Requirements. At a minimum, in order to be considered Core Competent, a VMGR unit must possess the following number of listed combat leadership designations.

VMGR CMMR COMBAT LEADERSHIP REQUIREMENTS (6000 PHASE)								
DESIGNATION	PILOT		TSO		LOADMASTER		CREWMASTER*	
	12 PLANE	6 PLANE	12 PLANE	6 PLANE	12 PLANE	6 PLANE	12 PLANE	6 PLANE
TPC	18	9						
SEC LDR	8	4						
DIV LDR	4	2						
TACRAC	6	3						
RC			2	1				
STRATRAC	2	1						
RS					6	3	6	3
QASO					4	2	4	2

\*During transition from FM and LM to CM, any FM or LM can substitute for a CM number, not to exceed the quantity in the respective FM, or LM column and provided requisite Legacy skill training has been completed.

## 2. Qualifications and Designations

VMGR CMMR COMBAT LEADERSHIP REQUIREMENTS (6000 PHASE)		
QUALIFICATION	PILOTS	
	12 PLANE	6 PLANE
FCP	4	2

110. VMGR ORDNANCE REQUIREMENTS. See KC-130T CCRM (Ordnance Module) for specific squadron requirements.

### 111. VMGR EVENT REQUIREMENTS

#### 1. Device Options

Code	Requirement
A	Event performed in aircraft.
S	Event performed in simulator or a simulated practical application.
A/S	Event performed in aircraft preferred/simulator optional.
S/A	Event performed in simulator preferred/aircraft optional.

#### 2. Event Conditions

Code	Requirement
D	Shall be flown or conducted during day.
N	Shall be flown or conducted at night (using available night vision devices or flown unaided).
(N)	May be flown or conducted day or night; if at night, available night vision devices may be used or flown unaided.
NS	Shall be flown or conducted at night using available night vision devices.
(NS)	May be flown or conducted day or night; if at night, available night vision devices shall be used.
N*	Event Shall be flown or conducted at night unaided.
(N*)	Event may be flown or conducted at night; if at night, shall be flown unaided.

3. All flights annotated with an "E" shall be evaluated per NAVMC 3500.14.

4. Minimum required Refresher flights are indicated with an "R". Additional guidance concerning Refresher pilots is contained in NAVMC 3500.14.

5. The intent of NS events is to conduct the events with use of NVDs. This should not restrict aircrews from executing events between sunset and end of nautical twilight or beginning of nautical twilight and sunrise when NVDs are

less effective. Use of NVDs during these periods shall be at the discretion of the aircraft commander with safety and the NS intent in mind.

6. For NS operations, the fixed-wing minimum altitudes delineated in NAVMC 3500.14 shall be adhered to in all phases of flight except for ALZ operations and airdrops from IP inbound, at which point a descent to airdrop altitude or final approach procedure may be conducted. Minimum altitudes for Air Delivery and ALZ operations shall be as per the KC-130 ANTTP.

112. VMGR AIRCREW TRAINING REFERENCES. The following references shall be utilized to ensure safe and standardized training procedures, grading criteria, and aircraft operation:

Federal Aviation Regulations/Aeronautical Information Manual (FAR/AIM)  
OPNAVINST 3710.7 NATOPS General Flight and Operating Instructions  
OPNAVINST 1542.7 Crew Resource Management Program  
NAVMC 3500.14 Aviation Training and Readiness Program Manual  
NATOPS Flight Manuals (NFM)  
NAVAIR 00-80T-112 NATOPS Instrument Flight Manual  
NTRP 3-22.2-KC-130 (Secret)  
NTRP 3-22.4-KC-130  
ANTTP 3-22.1-KC-130 (Secret)  
ANTTP 3-22.2-KC-130  
MAWTS-1 KC-130 Course Catalog  
MCO 3500.109 USMC Aviation Weapons and Tactics Training Program  
MAWTS-1 TACAIR NVD Manual  
MCRP 3-25 Multi-Service Brevity Codes  
AFI 13-217 Drop Zone and Landing Zone Operations  
AFI 11-231 Computed Air Release Point Procedures  
Allied Tactical Publication - (ATP-56(B)) Air to Air Refueling

113. TRAINING EVENT PERFORMANCE REQUIREMENTS

1. Purpose. To familiarize the student with general syllabus expectations, definitions, and the observation scale found on the aircrew training form (ATF).

2. General

a. This Manual generalizes mission guidance to allow for local conditions and to allow this Manual to remain unclassified. HQMC (DC AVN) and CG MCCDC encourage squadrons to use the full range of tactics contained in the tactical manuals and adopt the latest developed and proven tactics.

b. The 1000 Phase includes all emergencies that are indicated with warnings, all emergency procedures with critical memory items, those with associated warnings, land as soon as practical or land as soon as possible emergencies, and those that refer to any of the above. Aircrew will be expected to memorize critical memory items and warnings associated with emergency procedures. They will be familiar with and be able to quickly look up other (non-memory) emergency procedures and their notes and cautions. To reinforce the latter, during flight briefs, aircrew will open PCLs to the appropriate page to review notes, cautions, and other non-memory items.

c. All flights shall terminate with a comprehensive debrief with emphasis on aircrew performance and procedures or systems discussed. Instructors should use all available debriefing techniques.

d. Definitions

(1) Discuss

(a) The instructor shall discuss a system, procedure, or maneuver during the brief, in flight, or debrief.

(b) The student shall demonstrate an understanding of all discussed items listed in the event description.

(c) Demonstrate/Introduce flight events shall be discussed during the brief.

(d) Emergencies listed in the event description are treated as discussion items during the brief and may be simulated during the flight at the option of the instructor and in accordance with unit SOP. EPs for Simulator events will be treated as Demonstrate/Introduce items on the event in which they are listed and are subject to review during any subsequent event.

(2) Demonstrate

(a) Instructor performs the maneuver with accompanying description. At instructor discretion, the aircrew may perform the maneuver, but is not graded. Playback of recorded demonstrations may be used during simulator events.

(b) The student observes the maneuver and is responsible for knowledge of the procedures during the brief.

(3) Introduce

(a) At his option, the instructor may perform the maneuver with an accompanying description followed by the student conducting the maneuver, or he may instruct the student through the maneuver without demonstration.

(b) The student shall perform the maneuver with instruction as necessary and is responsible for knowledge of the procedures prior to the flight. In general, the expectation is that the student will not consistently recognize errors and will frequently be outside performance standards.

(4) Review

(a) The instructor observes and grades the maneuver with only minimal instruction.

(b) The student is expected to perform the maneuver with minimal instruction and with only minor procedural errors. In general, the expectation is that the student will consistently recognize errors; however corrections may not be timely and there may be some excursions outside performance standards.

(5) Evaluate

(a) The instructor observes and grades the maneuver without instructing the student. An airborne critique of the student's performance is at the option of the instructor.

(b) The student is expected to perform the maneuver without instruction, with minor or no procedural errors, and at a level acceptable to warrant progress in the syllabus. The expectation is that the student will consistently apply timely corrections with very few and quickly corrected excursions outside performance standards.

(6) Expose

(a) The instructor shall expose the student to the procedure or consideration during the brief, in flight or debrief.

(b) The student is not responsible for the knowledge of the procedure or consideration prior to the flight.

e. Observation Scale. The following table describes the numerical observations assigned for graded events. The comments that relate to each score are designed to assist instructors in assigning the correct observation based upon a student's demonstrated performance.



Observation Scale				
Observation	Level of Learning	General	Training as an Individual	Training as a Crew Member*
5	Correlation	Proactive. Ahead of the situation. Reacts correctly with changing conditions. And/or changing mission.	Performance is correct, efficient and skillful. Deviations are very minor. The student initiates corrections, if required, and they are appropriate, smooth, and rapid.	Proactive management of resources in dynamic environment. Mission effectiveness and safety enhanced by planning and coordination.
4	Application	Self/crew recognition of errors. Correct application of resources.	Self-Assess and corrects errors in time. Deviations are brief and minor. Corrections are appropriate and timely.	Active Management. Recognize and Correct Errors. Maintain crew redundancy to improve mission effectiveness and reduce risk.
3	Understanding	Minor errors not detected. Crew redundancy diminished.	Errors not detected and/or corrected in a timely manner. Corrections noticeably lag deviations.	Minor errors not detected and/or corrected. Risk unchanged.
2	Rote	Task accomplished mechanically and/or with limited situational awareness. Crew redundancy lost. Risk Increased.	Errors not recognized and/or corrected.	Errors not recognized and/or corrected.
1	Unfamiliar	Unable.	Skills not up to task.	Skills not up to task.
*The instructor must consider, based on their current performance, how well could they handle an unexpected increase in task loading, cumulative conditions, or crew factors?				

CHAPTER 2

KC-130T PILOT (MOS 7556/7557)

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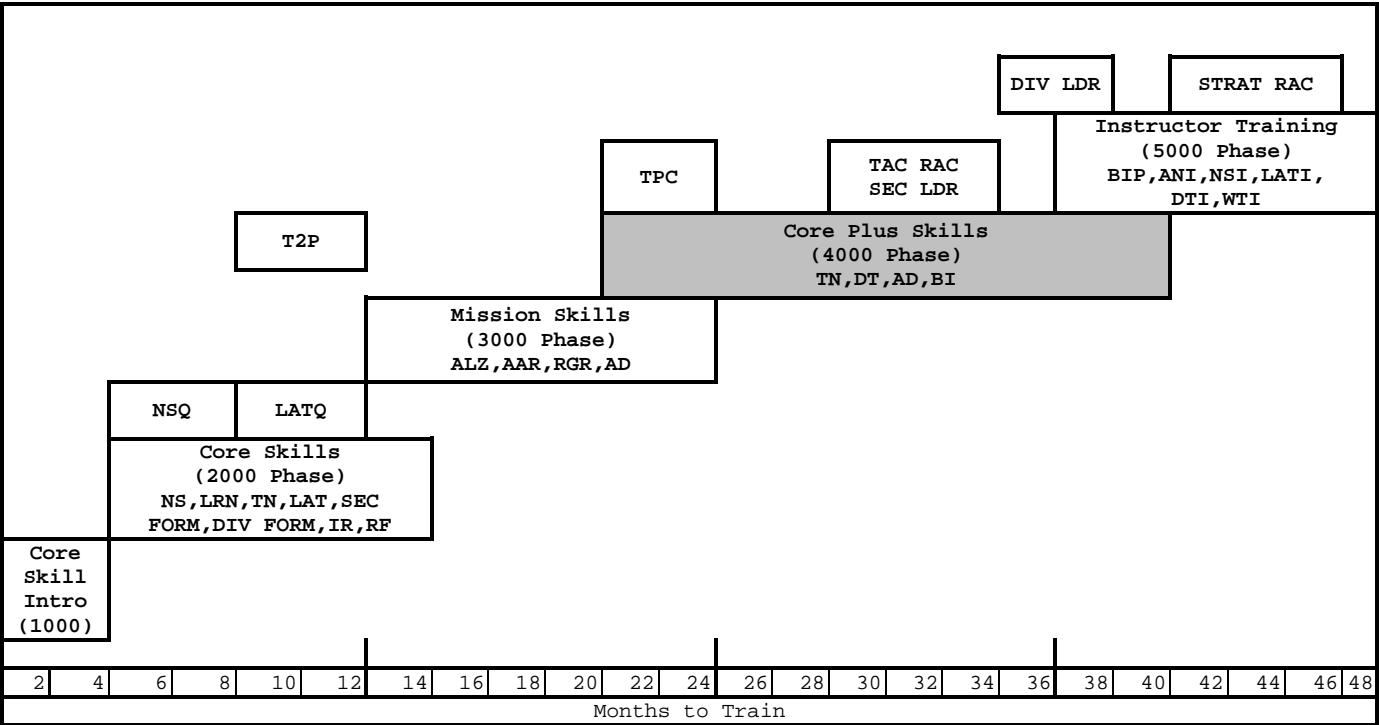
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CHAPTER 2

KC-130T PILOT MOS 7556/7557

200. KC-130T PILOT 7556/7557 INDIVIDUAL TRAINING AND READINESS REQUIREMENTS. This T&R Syllabus is based on specific goals and performance standards designed to ensure individual proficiency in Core and Mission Skills. The goal of this chapter is to develop individual and unit warfighting capabilities.

201. KC-130T PILOT TRAINING PROGRESSION MODEL. This model represents the recommended training progression for the average KC-130T Pilot. Units should use the model as a point of departure to generate individual training plans.



202. INDIVIDUAL CORE SKILL PROFICIENCY (CSP) REQUIREMENTS. A CSP crew consists of individuals representing each crew position who have achieved and currently maintain individual CSP. In order to be considered proficient in a Core Skill, an individual must attain and maintain proficiency in Core Skill events as delineated in the below paragraphs.

1. Events Required to Attain Individual CSP. To initially attain CSP in a Core Skill, an individual must simultaneously have a proficient status in all 2000 phase T&R events listed for that Core Skill:

INDIVIDUAL CORE SKILL PROFICIENCY (CSP) ATTAIN TABLE						
T&R events required to Attain CSP (2000 Phase)						
NS	LRN	TN	LAT	SEC FORM	DIV FORM	TR
2150R	2160R	2200R	2260R	2300R	2301R	2400R
2151R		2250R	2261R	2350R		
		2251R				
Gray highlight & an R suffix on the event code = Refresher POI						

2. Events Required to Maintain Individual CSP. To maintain CSP in a Core Skill, an individual must maintain proficiency in all 2000 phase T&R events listed for that Core Skill:

INDIVIDUAL CORE SKILL PROFICIENCY (CSP) MAINTAIN TABLE						
T&R events required to Maintain CSP (2000 Phase)						
NS	LRN	TN	LAT	SEC FORM	DIV FORM	TR
2151R	2160R	2251R	2261R	2350R	2301R	2400R
Gray highlight & an R suffix on the event code = Refresher POI						

203. INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) REQUIREMENTS. An MSP crew consists of individuals representing each crew position who have achieved and currently maintain individual MSP. To be considered proficient in a Mission Skill, an individual must attain and maintain proficiency in Mission Skill events as delineated in the below paragraphs.

1. Events Required to Attain Individual MSP. To initially attain MSP in a Mission Skill, an individual must simultaneously have a proficient status in all 3000 phase T&R events listed for that Mission Skill:

INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) ATTAIN TABLE			
T&R events required to Attain MSP (3000 Phase)			
ALZ	AAR	RGR	AD
3500R	3600R	3660R	3700R
3501R	3601R		3750R
3502R	3650R		
3550R			
Gray highlight & an R suffix on the event code = Refresher POI			

2. Events Required to Maintain Individual MSP. To maintain MSP in a Mission Skill, an individual must maintain proficiency in all 3000 phase T&R events listed for that Mission Skill:

INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) MAINTAIN TABLE			
T&R events required to Maintain MSP (3000 Phase)			
ALZ	AAR	RGR	AD
3502R	3600R	3660R	3750R
3550R	3650R		
Gray highlight & an R suffix on the event code = Refresher POI			

3. Events Required to Attain Individual Proficiency in Core Plus / Mission Plus Skills. Proficiency in Core Plus Skills is not required to obtain unit CSP. Training to Core Plus Skills is at the discretion of the unit commanding officer. To initially attain proficiency in a Core Plus Skill, an

individual must simultaneously have a proficient status in all T&R events listed for that Core Plus Skill:

INDIVIDUAL CORE PLUS SKILL ATTAIN TABLE				
T&R events required to Attain Core Plus Skill (4000 Phase)				
CORE PLUS SKILLS				MISSION PLUS
TN	TR	DT	AD	BI
4200R	4400R	4410R	4700R	4710R
4201R		4411R		
4250R				
Gray highlight & an R suffix on the event code = Refresher POI				

4. Events Required to Maintain Individual Proficiency in Core Plus / Mission Plus Skills. To maintain proficiency in a Core Plus Skill, an individual must maintain proficiency in all T&R events listed in the table below for that Core Plus Skill:

INDIVIDUAL CORE PLUS SKILL MAINTAIN TABLE				
T&R events required to Maintain Core Plus Skill (4000 Phase)				
CORE PLUS SKILLS				MISSION PLUS
TN	TR	DT	AD	BI
4201R	4400R	4411R	4700R	4710R
4250R				
Gray highlight & an R suffix on the event code = Refresher POI				

204. REQUIREMENTS, QUALIFICATION AND DESIGNATION TABLES. The tables below delineate T&R events required to be completed to attain proficiency, and initial qualifications and designations. In addition to event requirements, all required stage lectures, briefs, squadron training, prerequisites, and other criteria shall be completed prior to completing final events. Qualification and designation letters signed by the commanding officer shall be placed in the individual's NATOPS jacket. Loss of proficiency in all qualification events causes the associated qualification to be lost. Regaining a qualification requires completing all R-coded syllabus events associated with that qualification.

INDIVIDUAL QUALIFICATION REQUIREMENTS	
Qualification	Event Requirements
LEFT SEAT QUAL	RQD-6100, 75 hours in T/M/S and APRB recommendation
NSQ	NS-2150R, NS-2151R, TN-2250R, TN-2251R, 10 hours total NVD time (minimum 5 hours LLL).
LATQ	LAT-2260R, LAT-2261R
DTQ	DT-4410R, DT-4411R

INDIVIDUAL DESIGNATION REQUIREMENTS	
Designation	Event Requirements
T3P	NTPS-6110, Core Skill Introduction phase complete, NATOPS open, closed and oral exam complete (NTPS-6010, 6011, 6012).
T2P	NTPS-6111, Core Skill phase complete, ACPM-82XX Phase complete, NATOPS open, closed and oral exam complete, T2P Tactics exam complete (NTPS-6010, 6011, 6012, 6013), APRB recommendation.
TPC	NTPS-6118, Core Skill and Mission Skill Phase should be complete, ACPM 83XX Phase complete, NATOPS open, closed and oral exam complete (NTPS-6010, 6011, 6012), and SNTPS-6112, NTPS-6113, NTPS-6114, NTPS-6115, NTPS-6117, APRB recommendation.
Standard Instrument	INST-6130, INST-6030, INST-6031, IAW OPNAV 3710.7._
Special Instrument	INST-6131, INST-6130, INST-6030, INST-6031, IAW OPNAV 3710.7._
FCF PILOT	FCP-6106, TPC.
BIP	BIP-5100, NTPS-6118, 100 TPC hours in series. APRB recommendation.
SECT LEAD	SL-6300, SL-6301, 100 flight hours as a TPC, two flights in wingman position as a designated TPC, SL academics complete, ACPM-8630, ACPM-8660, and APRB recommendation.
TACRAC	RAC-6311, TACRAC academics complete. Evaluation flight should be flown in conjunction with SL-6300 or SL-6301. Squadron commanding officers should designate the Pilot a Tactical RAC after or in conjunction with designation as Section Lead.
DIV LEAD	DL-6303, DL-6304, Minimum of two flights as a designated SL, 200 flight hours as a TPC, DL academics complete, ACPM-8640, ACPM-8641, ACPM-8620, and APRB recommendation.
STRATRAC	RAC-6314, Designated DL (DL-6304) and TACRAC (RAC-6311), STRATRAC academics complete, APRB recommendation.
ANI/NI/GNE	NI-5140 and NI-5141. NI-5140 shall be instructed by an ANI, NI, GNE, or Model Manager. NI-5141 shall be instructed by the NI, GNE, or Model Manager. GNE is designated by the MAG commanding officer.
FLSE	FLSE-5320, Division Lead (DL-6305), and TACRAC (RAC-6312). This flight shall be observed by the KC-130 Wing Program Coordinator. MAG Commanding Officers should designate the Pilot a FLSE at the completion of this flight.
FRSI	FRSI-5145, FRSI-5146, FRSI-5147, NI-5141, 1000 hours in T/M/S, APRB recommendation.
LATI	IAW the MAWTS-1 Course Catalog.
NSI	IAW the MAWTS-1 Course Catalog.
WTI	IAW the MAWTS-1 Course Catalog.
DTI	IAW the MAWTS-1 Course Catalog.

205. PROGRAMS OF INSTRUCTION (POI)

1. General. The time required to train a KC-130T Pilot to completion of the Core Plus phase will vary depending on previous Pilot's experience. Basic (B), Transition (T), and Series Conversion (SC) Pilots shall fly the entire syllabus. Refresher Pilots represent a varying background and should fly flights coded with an (R). All KC-130J Pilots with no prior KC-130F/R/T experience shall attend the CIQ course offered by the HTU followed by the SC flying syllabus. Commanding officers will review the qualifications, previous experience, and demonstrated ability of previously qualified KC-130F/R/T Pilots with a view towards waiving and/or combining required flights on a case by case basis. When a crewmember completes a stage of training, that crewmember need only maintain proficiency in the R coded events for that stage to remain proficient.

2. Basic/Transition/Series Conversion (B/T/SC) POI. Basic (B), Transition (T), and Series Conversion (SC) Pilots shall fly the entire syllabus.

WEEKS	COURSE	PERFORMING ACTIVITY
1-3	USMC C-130 Co-Pilot Initial Qualification (CIQ) Simulator Training	Herc Training Unit NAS JRB Ft. Worth
4-7	Core Skill Introduction Training	Tactical Squadron
8-56	Core Skill Training	Tactical Squadron
56-104	Mission Skill Training	Tactical Squadron
104-188	Core Plus Training	Tactical Squadron

3. Modified Refresher/Refresher (MR/R) POI. The MR POI mirrors the R POI. Refresher Pilots represent a varying background and should fly flights coded with an (R). Commanding officers will review the qualifications, previous experience, currency, and demonstrated ability of Refresher Pilots with a view towards waiving and/or combining required flights.

WEEKS	COURSE	PERFORMING ACTIVITY
1	Core Skill Introduction Simulator Training	Herc Training Unit NAS JRB Ft. Worth
2-3	Core Skill Introduction Training	Tactical Squadron
3-12	Core Skill Training	Tactical Squadron
13-16	Mission Skill Training	Tactical Squadron
17-24	Core Plus Training	Tactical Squadron

4. Instructor Pilot POI

WEEKS	COURSE	PERFORMING ACTIVITY
1	Fleet Replacement Squadron Instructor (FRSI)	Tactical Squadron (NE)
1	Basic Instructor Pilot (BIP)	Tactical Squadron
1	NATOPS Instructor	Tactical Squadron
2	Low Altitude Tactics Instructor	Tactical Squadron
1	Defensive Tactics Instructor	MAWTS-1
2	Night Systems Instructor	MAWTS-1
7	Weapons and Tactics Instructor	MAWTS-1
1	Flight Leadership Standardization Evaluator (FLSE)	Tactical Squadron (Program Coordinator)



206. ACADEMIC TRAINING

1. Academic training shall be conducted for each phase/stage of the syllabus. Where indicated, standardized academic training materials exist and may be obtained from the sponsoring activity.
2. External academic courses of instruction available to complete the syllabus are listed below:

COURSE	ACTIVITY
Survival, Evasion, Resistance, and Escape (SERE) Course	NAS Brunswick ME NAS North Island CA
NITE lab	Tactical Squadron
Weapons and Tactics Instructor (WTI)	MAWTS-1
Environmental Survival Courses	Regional/Seasonal Survival Schools
Advanced Airlift Tactics Training Course (AATTC)	AATTC, St. Joseph MO

207. CORE SKILL INTRODUCTION PHASE (1000)

1. General

a. The KC-130T Model Manager shall be responsible for Core Skill Introduction phase standardization. Squadrons shall maintain a qualified NATOPS Evaluator (NE) responsible for training and qualifying squadron Fleet Replacement Squadron Instructor (FRSI) and Contract Simulator Instructors (CSI). In order to maintain community standardization, the squadron NATOPS Evaluators (NE) shall receive a standardization evaluation from the Model Manager every 18 months.

b. All academic requirements for this phase of training are incorporated into the CIQ course, per paragraph 205.

c. All events in the Core Skill Introduction phase shall be instructed/evaluated by a FRSI/CSI via appropriate aircrew evaluation form.

d. Instructors shall be responsible for mission briefs. Students may conduct a mission brief only after observing the instructor brief a mission in that specific phase.

2. Syllabus Assignment

a. Basic, Transition, and Series Conversion. B/T/SC Pilots shall be assigned to the Basic POI as per paragraph 205 and complete the full Core Skill Introduction Phase (1000). B/T/SC Pilots shall be trained and evaluated in the right seat. Upon completion of Core Skill Introduction training the Pilot will be designated a NATOPS Transport Third Pilot (T3P), MOS 7556, by the squadron commanding officer. The Pilot will be capable of basic aircraft co-pilot duties to include normal and emergency procedures, crew resource management, and mission planning.

b. Refresher. Refresher and Modified Refresher Pilots shall be assigned to the Refresher POI as per paragraph 205. TPC/T2P in the Refresher syllabus

shall be trained and evaluated in the left and right seat. A minimum of one flight event shall be flown at night.

3. Familiarization (FAM)

a. Purpose. Introduce Pilots to fundamental KC-130 NATOPS, instrument, and CRM procedures.

b. General

(1) Basic, Transition, Series Conversion, and Refresher third Pilots (T3P) shall be trained and evaluated in the right seat. A minimum of two (N) coded flights shall be flown at night. TPC and T2P refresher Pilots shall be trained and evaluated in the left and right seat. One of the (N) coded flights shall be flown at night.

(2) Basic, Transition, and Series Conversion Pilots should complete the USMC KC-130 CIQ offered by the HTU at NAS JRB Ft. Worth prior to this stage.

c. Crew Requirements. Shall be instructed/evaluated by a FRSI/CSI.

d. Academic/Ground Training

(1) Prior to FAM-1100, all Basic, Transition and Series Conversion Pilots should complete a familiarization training evolution to include cockpit management, aircraft preflight and post flight, TFOA inspections, emergency evacuation, and use and donning of all emergency equipment to include bailout training.

(2) Core Skill Introduction syllabus overview.

(3) NATOPS flight manual overview.

(4) VMGR squadron Mission Essential Task List (METL).

(5) Six functions of Marine aviation.

(6) KC-130 capabilities review.

(7) NATOPS briefing techniques.

(8) NITE Lab is optional for Core Skill Introduction training but should be completed at the earliest possible time as it is required to begin the NS stage of Core Skill Training.

SFAM-1001          2.0                                  E   OFT/WST   S   D

Goal. Introduce expanded checklists up to and including takeoff, CRM, aircraft limitations, and performance computations.

Requirement. Introduce expanded cockpit checklists up to the takeoff checklist. The Pilot under instruction shall practice the expanded cockpit checklists to include all appropriate responses and associated actions.

Performance Standard. Per the NFM. The Pilot shall be able to recall aircraft limitations with associated checklists.

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SFAM-1002	2.0	E	OFT/WST	S	D
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Goal. Introduce expanded checklists from takeoff to secure; introduce takeoff and approach brief.

Requirement. Introduce expanded cockpit checklists from takeoff to secure. The Pilot shall practice the expanded cockpit checklists up to and including the secure checklist. The Pilot shall practice previously introduced checklists.

Performance Standard. Per the NFM. Pilot shall be able to recall aircraft limitations.

Prerequisite. SFAM-1001.

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SFAM-1003	2.0	E	OFT/WST	S	D
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Goal. Train the Pilot in normal procedures and system malfunctions. Introduce start malfunctions.

Requirement. Introduce start malfunctions. The Pilot shall practice normal checklists and aircraft limitations associated with the checklists. The Pilot should compute Takeoff and Landing Data (TOLD) card.

Performance Standard. Per the NFM. The Pilot shall diagnose and handle all start malfunctions per NFM.

Prerequisite. SFAM-1002.

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SFAM-1004	2.0	E	OFT/WST	S	D
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Goal. Train the Pilot in normal procedures, system malfunctions, and ground emergency procedures.

Requirement. Introduce ground emergencies. The Pilot shall practice normal checklists and start malfunctions. The Pilot should compute TOLD card.

Performance Standard. Per the NFM. Pilot shall diagnose and handle all ground emergencies per NFM.

Prerequisite. SFAM-1003.

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SFAM-1005	2.0	R	E	OFT/WST	S	D
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Goal. Cockpit procedures stage progress review. Review normal checklists, start malfunctions, and emergency procedures. Practice ground emergencies.

Requirement. Review normal checklists, start malfunctions, and emergency procedures. The Pilot shall practice ground emergencies and compute TOLD card.

Performance Standard. Per the NATOPS FLIGHT MANUAL.

Prerequisite. SFAM-1004.

SFAM-1006      4.0      — — E    OFT/WST   S   D

Goal. Train the Pilot in normal procedures, propeller system malfunctions, and emergency procedures.

Requirement. Introduce VFR departure and climb, basic airwork, VFR approach, landings, and abort procedures. The Pilot shall practice VFR approach and landings with coaching as necessary. The Pilot should compute TOLD card.

Performance Standard. Per the NFM. Pilot shall diagnose and handle all aborts and propeller malfunctions per NFM.

Prerequisite. SFAM-1005.

SFAM-1007      4.0      E    OFT/WST   S   D

Goal. Train the Pilot in normal procedures, system malfunctions, and emergency procedures. Introduce steep turns and approach to stalls.

Requirement. Introduce steep turns, approach to stalls, and engine systems failures. The Pilot shall practice steep turns and approach to stalls. The Pilot should compute 3-engine go-around capabilities.

Performance Standard. Per the NFM. The Pilot shall diagnose and handle all engine systems malfunctions per NFM.

Prerequisite. SFAM-1006.

SFAM-1008      4.0      E    OFT/WST   S   D

Goal. Train the Pilot in normal procedures, electrical system, system malfunctions, emergency procedures, and instrument procedures. Introduce flight planning, clearance procedures, radio NAVAID IFF/SIF management, and GCA approaches.

Requirement. Introduce flight planning, clearance procedures, radio NAVAID IFF/SIF management, and GCA approaches. Introduce electrical system and associated malfunctions. The Pilot shall practice duties associated with instrument flight procedures. The Pilot should compute 3-engine climb performance.

Performance Standard. Per the NFM. The Pilot shall diagnose and handle all electrical malfunctions per NFM.

Prerequisite. SFAM-1007.

SFAM-1009      4.0      E    OFT/WST   S   D

Goal. Train the Pilot in normal and instrument flight procedures, bleed air and anti-icing system and malfunctions, and emergency procedures. Introduce ILS procedures.

Requirement. Introduce ILS procedures, and bleed air and anti-icing system malfunctions.

Performance Standard. Per the NFM. Pilot shall diagnose and handle bleed air and anti-icing emergencies per NFM.

Prerequisite. SFAM-1008.

SFAM-1010	4.0		E	OFT/WST	S	D
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Goal. Train the Pilot in normal and instrument flight procedures, fuel system malfunctions and emergency procedures. Introduce TACAN, VOR, ADF approaches, and holding procedures.

Requirement. Introduce TACAN, VOR, ADF approaches, and holding procedures. Introduce fuel system malfunctions.

Performance Standard. Per the NFM. Pilot shall diagnose and handle fuel system malfunctions per NFM.

Prerequisite. SFAM-1009.

SFAM-1011	4.0		E	OFT/WST	S	D
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Goal. Train the Pilot in normal procedures, hydraulic system and malfunctions, emergency procedures, and instrument procedures to include circling and penetration/high altitude approaches.

Requirement. Introduce circling approaches, and penetrations/high altitude approaches. Introduce hydraulic malfunctions, trim, flaps, and landing gear failures. The Pilot shall practice circling approaches and penetration/high altitude approaches.

Performance Standard. Per the NFM. The Pilot shall diagnose and handle hydraulic malfunctions and trim, flaps and landing gear failures per NFM.

Prerequisite. SFAM-1010.

SFAM-1012	4.0	R		E	OFT/WST	S	D
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Goal. Train the Pilot in normal procedures, system malfunctions, emergency procedures, and instrument procedures. Introduce engine-out approaches, landings, and missed approach/go-around procedures. Introduce takeoff continued after engine failure.

Requirement. Introduce engine-out approaches, landings, and missed approach/go-around procedures. Introduce takeoff continued after engine failure. The Pilot should compute certain performance computations.

Performance Standard. Per the NFM. Pilot shall practice takeoff continued after engine failure procedures per NFM.

Prerequisite. SFAM-1011.

SFAM-1013	4.0	R		E	OFT/WST	S	D
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Goal. Train the Pilot in normal procedures, system malfunctions, emergency procedures, and instrument procedures.

Introduce two-engine approach, landing, and go-around.  
Introduce partial panel/no-gyro approach.

Requirement. Introduce two-engine approach, landing, go-around, and partial panel/no-gyro approaches. Introduce fuel/cargo jettison and NAVAID/radio failure. Pilot shall practice two-engine approaches, landings, and go-around with coaching from the CSI as necessary.

Performance Standard. Per the NFM. The Pilot shall conduct fuel/cargo jettison procedures and handle NAVAID/radio failure per NFM.

Prerequisite. SFAM-1012.

SFAM-1014	2.0	R	E	OFT/WST	S	D
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Goal. Simulator stage progress review. Review all previously introduced procedures and system malfunctions.

Requirement. Review all previously introduced procedures and system malfunctions.

Performance Standard. Per the NFM. Pilot shall practice all procedures and handle all emergencies per NFM.

Prerequisite. SFAM-1013.

FAM-1100	3.0		E	1 KC-130	A	D
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Goal. Train the Pilot in normal flight procedures. Introduce preflight, taxi, take-off, VFR departure, aerodynamic performance, stability and control, approach to stalls, VFR approach, VFR break, 100 percent and 50 percent flap landings.

Requirement. Instructor shall introduce preflight, taxi, take-off, VFR departure, aerodynamic performance, stability and control, approach to stalls, VFR approach, VFR break, 100 percent and 50 percent flap landings. Instructor should introduce start malfunctions. The Pilot should compute VMC, take-off speed, refusal speed, stall speed, climb, approach, threshold, and touchdown speed.

Performance Standard. Per the NFM. Pilot should diagnose and handle all start malfunctions per NFM.

Prerequisite. SFAM-1014.

FAM-1101	3.0	R	E	1 KC-130	A	D
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Goal. Train the Pilot in normal and instrument flight procedures. Introduce instrument departure, basic instrument maneuvers to include timed turns, climbs, and descents, GCA procedures, and oil system malfunctions.

Requirement. Instructor shall introduce instrument departure, basic instrument maneuvers to include timed turns, climbs, and descents, GCA procedures, and oil system malfunctions. Instructor shall introduce NAVAID configuration and NAV MODE selector operation. The Pilot shall practice 100 percent and

50 percent flap landings. The Pilot should compute VMC, takeoff speed, refusal speed, specific range, approach, threshold, and touchdown speed.

Performance Standard. Per the NFM and IFM. The Pilot shall diagnose and handle all oil system malfunctions per NFM.

Prerequisite. FAM-1100.

FAM-1102	3.0	E 1 KC-130 A N*
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Goal. Train the Pilot in normal procedures, instrument flight procedures to include ILS and Localizer approach procedures, bleed air system malfunctions, and ground emergency procedures.

Requirement. Instructor shall introduce ILS/Localizer procedures, the bleed air system, and ground emergencies. The Pilot shall practice 100 percent and 50 percent flap landings. The Pilot should compute VMC, takeoff speed, refusal speed, approach speed, threshold speed, and touchdown speed.

Performance Standard. Per the NFM and IFM. Pilot shall demonstrate an operational knowledge of the bleed air system. The Pilot shall diagnose and handle ground emergencies per NFM.

Prerequisite. FAM-1101.

FAM-1103	3.0	R	E 1 KC-130 A (N*)
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Goal. Train the Pilot in normal procedures, instrument flight procedures to include TACAN, VOR, and ADF approach procedures, system malfunctions, and emergency procedures.

Requirement. Instructor shall introduce TACAN, VOR, and ADF approaches. Instructor shall introduce hydraulics system. The Pilot should practice TACAN, VOR, and ADF approaches to 100 percent and 50 percent flap landings. The Pilot should compute VMC, takeoff speed, refusal speed, service ceiling (3 engines with pods), approach speed, threshold speed, and touchdown speed.

Performance Standard. Per the NFM and IFM. Pilot shall demonstrate an operational knowledge of the hydraulics system.

Prerequisite. FAM-1102.

FAM-1104	3.0	E 1 KC-130 A D
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Goal. Train the Pilot in normal procedures, instrument flight procedures to include holding, circling approaches and penetrations/high altitude approaches, system malfunctions, abort procedures, and in-flight emergency procedures.

Requirement. Instructor shall introduce abort procedures. Instructor shall introduce holding, circling approaches, penetrations/high altitude approaches, and in-flight emergencies. Pilot should practice circling approaches, penetration/high approaches to 100 percent and 50 percent flap

landings. The Pilot should compute VMC, takeoff speed, refusal speed, maximum endurance (4 engines, normal bleed), approach speed, threshold speed, and touchdown speed.

Performance Standard. Per the NFM and IFM. Pilot shall diagnose and handle aborts and in-flight emergencies per NFM.

Prerequisite. FAM-1103.

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FAM-1105	3.0	R	E	1	KC-130	A	N*
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Goal. Train the Pilot in normal procedures, instrument flight procedures, system malfunctions, in-flight emergency procedures to include engine-out operations.

Requirement. Instructor shall introduce propeller and engine malfunctions. Instructor shall introduce engine-out operations, 3-engine precision approaches, landings, missed approaches and go-around procedures. Pilot should compute VMC, takeoff speed, refusal speed, cruise ceiling (3 engines with pods), approach, threshold, and touchdown speeds.

Performance Standard. Per the NFM and IFM. Pilot shall diagnose and handle propeller and engine malfunctions per NFM.

Prerequisite. FAM-1104.

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FAM-1106	3.0		E	1	KC-130	A	D
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Goal. Train the Pilot in normal procedures, instrument flight procedures, electrical system malfunctions, and in-flight emergency procedures to include 3-engine non-precision approaches, missed approaches and go-around procedures.

Requirement. Instructor shall introduce 3-engine non-precision approaches, missed approaches and go-around procedures. Instructor shall introduce the electrical system and nacelle overheat warning. Pilot should practice aborts and engine out non-precision approaches and landings. Pilot should compute VMC, takeoff speed, refusal speed, specific range (3 engines, 20,000 feet), 3-engine approach, threshold, and touchdown speeds.

Performance Standard. Per the NFM and IFM. Pilot shall demonstrate an operational knowledge of the electrical system and procedures for nacelle overheat warning.

Prerequisite. FAM-1105.

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FAM-1107	3.0	R	E	1	KC-130	A	D
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Goal. Train the Pilot in normal procedures, instrument flight procedures, fuel and oxygen system malfunctions, and in-flight emergency procedures to include fuselage fire and smoke and fume elimination. Introduce take-off continued after engine failure and demonstrate 2-engine approach.

Requirement. Instructor shall introduce 3-engine circling approach and take-off continued after engine failure. Instructor shall introduce fuel and oxygen systems and



associated malfunctions. Instructor shall demonstrate 2-engine and no-flap approaches and landings. Flight will be conducted in daylight VFR conditions. Pilot should compute 2-engine VMC (air), takeoff speed, refusal speed, 2-engine downwind, base, approach, threshold, and touchdown speeds.

Performance Standard. Per the NFM and IFM. Pilot shall demonstrate an operational knowledge of the fuel and oxygen systems and associated malfunctions.

Prerequisite. FAM-1106.

FAM-1108	3.0		E	1	KC-130	A	N*
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Goal. Train the Pilot in normal procedures, instrument flight procedures to include partial panel/no-gyro approaches. Introduce Auxiliary Power Unit malfunctions. Introduce pressurization, air conditioning, and anti-icing/de-icing system malfunctions, and in-flight emergency procedures.

Requirement. Instructor shall introduce partial panel/no-gyro approaches. Instructor shall introduce APU systems. Instructor shall introduce pressurization, air conditioning, and anti-icing/de-icing systems and associated malfunctions. Pilot should practice all previously introduced procedures. Pilot should compute TOLD card.

Performance Standard. Per the NFM and IFM. Pilot shall diagnose and handle all system malfunctions per NFM.

Prerequisite. FAM-1107.

FAM-1109	3.0	R		E	1	KC-130	A	(N*)
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Goal. Familiarization stage progress review. Review NATOPS normal, emergency, and instrument flight procedures.

Requirement. Instructor and Pilot shall review NATOPS normal, emergency, and instrument flight procedures. The Pilot shall perform all maneuvers required for a standard instrument rating. The Pilot should compute TOLD card.

Performance Standard. Per the NFM, IFM, and OPNAVINST 3710.7\_\_.

Prerequisite. FAM-1108.

#### 4. Long Range Navigation (LRN)

a. Purpose. Introduce the Pilot to long range, overwater, International Civil Aviation Organization (ICAO) environment procedures.

b. Crew Requirement. Shall be instructed/evaluated by a FRSI.

c. Academic/Ground Training. ICAO procedures, FLIP APs, and Foreign Clearance Guide familiarization.

LRN-1160                      16.0                      E   1 KC-130   A   (N\*)

Goal.    Introduce the Pilot to long-range overwater and ICAO procedures.

Requirement.    Instructor shall introduce overwater navigation, CRM, flight publications, fuel management, types of cruise schedules, factors affecting range, and operation in an ICAO environment.    Flight will be conducted in an ICAO environment.    Pilot shall compute performance data via overwater progress chart.    Flight shall consist of a minimum of (2) overwater legs.

Performance Standard.    Per the NFM.

Prerequisite.    FAM-1105.

5.   Tactical Navigation (TN)

    a.   Purpose.    To introduce Pilots to low level navigation and air delivery operations.

    b.   Crew Requirements.    Shall be instructed/evaluated by a FRSI.

    c.   Academic/Ground Training

        (1) Chart Preparation utilizing Portable Flight Planning System (PFPS).

        (2) Low level flight planning and navigation procedures IAW the Tactical Navigation chapter of the KC-130 ANTP.

        (3) Basic Air Delivery Procedures IAW the Air Delivery chapter of the ANTP.

TN-1200                      2.0                      E   1 KC-130   A   D

Goal.    Introduce the Pilot to low-level (LL) navigation and simulated air delivery (AD).

Requirement.    Instructor shall introduce procedures, limitations, and hazards associated with tactical navigation.    Instructor shall introduce AD procedures from LL ingress utilizing a modified slowdown profile.    Pilot will plan and navigate a low level route of at least 6 checkpoints.    Minimum altitude per T&R Program Manual.

Performance Standard.    Per the NFM and ANTP.    Demonstrate competence in time navigation by arriving at the objective within +/-90 seconds.

Prerequisite.    FAM-1105.

External Syllabus Support.    Military Training Route.

6.   Formation (FORM)

    a.   Purpose.    Introduce Pilots to basic section formation procedures.

    b.   Crew Requirements.    Shall be instructed/evaluated by a FRSI.

c. Academic/Ground Training. KC-130 ANTPP.

FORM-1300                      2.0    E                      2 KC-130                      A                      D

Goal. Introduce the Pilot to section formation procedures.

Requirement. Instructor shall introduce ground formation procedures, takeoff, climb, and a minimum of 3 join-ups. Instructor shall introduce parade, trail, free cruise positions, and VFR section recovery. Pilot should perform a minimum of 3 join-ups. Pilot should compute VMC, refusal speed, take-off speed, climb speed, approach, threshold, and touchdown speed.

Performance Standard. Per the NFM and ANTPP.

Prerequisite. FAM-1105.

External Syllabus Support. Special Use Airspace (SUAS).

## 7. Air-to-Air Refueling (AAR)

a. Purpose. To introduce Pilots to basic Air-to-Air Refueling (AAR) procedures.

b. Crew Requirements. Shall be instructed/evaluated by a FRSI. The minimum crew as defined by the NFM and ANTPP is required for flight events to include 1 observer per operated refueling pod.

c. Academic/Ground Training

- (1) ATP-56B NATO Air-to-Air Refueling Manual
- (2) In-flight refueling system.
- (3) KC-130 ANTTP.
- (4) AAR briefing using the Tactical Pocket Guide (TPG).

AAR-1600                      3.0                      E                      1 KC-130                      A                      (N\* )

Goal. Train the Pilot in Fixed-Wing AAR (FWAAR) procedures. Introduce radio procedures, tanker/receiver management, and emergency procedures related to FWAAR.

**Requirement.** Instructor shall introduce radio procedures, tanker/receiver management, and emergency procedures related to Fixed-Wing AAR. Instructor shall introduce Pilot responsibilities during AAR. Instructor shall introduce emergencies associated AAR to include hose jettison, landing with hose extended, and breakaway procedures. Pilot should compute AAR performance calculations.

Performance Standard. Per the NFM, ANTPP, and ATP-56B Part 2.

Prerequisite. FAM-1105.

External Syllabus Support. Fixed-wing receiver aircraft and Special Use Airspace (SUAS).

AAR-1601                      3.0                      E                      1 KC-130                      A                      D

Goal. Train the Pilot in Helicopter AAR (HAAR) procedures. Introduce radio procedures, tanker/receiver management, and emergency procedures related to HAAR.

Requirement. Instructor shall introduce rendezvous procedures, helicopter refueling procedures, and emergency procedures related to HAAR. Pilot should compute air refueling performance calculations. Flight will be conducted in day VMC conditions. Two (2) rendezvous' shall be conducted IAW the ATP-56 Part 3.

Performance Standard. Per the NFM, ANTPP, and ATP-56B Part 3.

Prerequisite. FAM-1105.

External Syllabus Support. Helicopter receiver aircraft and Special Use Airspace (SUAS).

8. NATOPS Check

a. Purpose. Conduct a NATOPS evaluation.

b. General. An annual NATOPS check may be conducted any time after completion of the Core Skill Introduction FAM stage. Commanders shall not designate replacement Pilots as a T3P and assign MOS 7556 until satisfactory completion of the entire Core Skill Introduction phase. The provisions of the NFM and OPNAVINST 3710.7\_\_ apply. All Pilots shall log appropriate RQD code upon completion.

c. Crew Requirements. Shall be instructed/evaluated by a FRSI or ANI.

d. Academic/Ground Training. Open and Closed book NATOPS examination taken within previous 60 days of flight.

CK-1800                      2.0                      R                      E                      1 KC-130                      A                      (N\*)

Goal. NATOPS evaluation flight.

Requirement. ANI shall conduct NATOPS evaluation flight. Basic, Transition, Series Conversion, and T3P Refresher Pilots shall be evaluated in the right seat. TPC and T2P Refresher Pilots should be evaluated in the left seat. Pilot should compute TOLD card.

Performance Standard. Per the NFM and OPNAVINST 3710.7\_\_.

Prerequisite. FAM-1109.

208. CORE SKILL PHASE (2000)

1. General. The focus of Core Skill Phase is to train the Pilot in duties essential to wartime employment. This includes: Night Systems (NS), Long Range Navigation (LRN), Tactical Navigation (TN), Low Altitude Tactics (LAT), Formation (FORM), and IR Threat Reaction (TR). The TPC shall conduct the mission brief for each initial event, but all Pilots should assist in the planning of the mission.

a. Pilots shall receive initial training by the appropriate instructor for each event.

b. At the completion of this phase, the Pilot may be recommended for upgrade to T2P by the APRB. While T2P designation is not a requirement to begin Mission Skill training, it should be obtained as soon as possible to provide the commander a measure of Pilot skill progression.

## 2. Night Systems (NS)

a. Purpose. To train the Pilot in NS. The Pilot will be capable of performing crew duties using NVDs during High Light Level (HLL) and Low Light Level (LLL) conditions.

### b. General

(1) The NSQ qualification syllabus consists of NS-2150, NS-2151, TN-2250, TN-2251 and requires 10 hours of total NVD time with at least 5 hours of Low Light Level (LLL) time. The initial 10 hours shall be flown in the aircraft. Pilots successfully completing these requirements shall be issued a Night Systems Qualified letter by the squadron commanding officer.

(2) Series Conversion Pilots that were previously designated NSQ may be issued the NSQ qualification letter upon successful completion of NS-2150 and NS-2151.

c. Crew Requirements. Pilots conducting initial and refresher Night Systems (NS) training shall be instructed by an NSI.

d. Academic/Ground Training. MAWTS-1 KC-130 NVD 1 and 2 Academic Support Package (ASP) courses and NITE lab.

NS-2150	2.0	365	SC,R	1 KC-130	A	NS
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Goal. Introduce the Pilot to NVD operations under HLL conditions.

Requirements. Instruct the Pilot in the use of NVDs to include normal and emergency procedures at altitude and in the terminal environment. The instructor shall demonstrate and introduce the NVD pattern to the student. A minimum of 5 touch and go's and 1 full stop shall be completed by the Pilot. Emphasize NVD considerations, calibration, preflight, and in-flight normal and emergency procedures.

Performance Standard. The Pilot shall demonstrate the ability to properly pre-flight and don NVDs, diagnose NVD emergencies and apply corrective action, understand capabilities and limitations of NVDs under HLL conditions, and demonstrate the ability to land the aircraft on NVDs.

Prerequisite. RQD-6110

NS-2151	2.0	180	SC,R	1 KC-130	A	NS
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Goal. Introduce Pilot to NVD operations under LLL conditions.

Requirements. Instruct the Pilot in the use of NVDs during LLL conditions to include normal and emergency procedures at altitude and in the terminal environment. The instructor shall demonstrate and introduce the NVD pattern to the student. A minimum of 5 touch and go's and 1 full stop shall be completed by the Pilot. Focus on the capabilities and limitations of the NVDs under LLL conditions, preflight, emergency procedures, calibration, preparation and in-flight use. The Pilot will review NVD mission planning software, and demonstrate knowledge of normal and emergency procedures outlined in the KC-130 ANTTTP and NVD specific items in the MAWTS-1 NVD Fixed-Wing manual.

Performance Standard. The Pilot shall demonstrate the ability to properly pre-flight and don NVDs, diagnose NVD emergencies and apply corrective action, understand capabilities and limitations of NVDs under LLL conditions and demonstrate the ability to land the aircraft on NVDs.

Prerequisite. NS-2150.

3. Long Range Navigation (LRN)

a. Purpose. Review long-range, over water navigation procedures and introduce the Pilot to squadron SOPs concerning deployment operations.

b. General

(1) This stage shall train the Pilot in long-range over water navigation to include performance computations, fuel planning, ICAO procedures, and Pilot duties associated with aircraft deployment operations.

(2) Upon completion of this stage, the Pilot shall be capable of deploying as a qualified Pilot on long-range over water operations.

c. Crew Requirements. This sortie may be instructed by a BIP.

d. Academic/Ground Training. The TPC shall introduce mission planning utilizing applicable SOPs, Foreign Clearance Guide, FLIPs, and review performance computations referencing the KC-130T NFM and NATOPS Performance Manual.

LRN-2160      8.0    365    SC,R      1 KC-130    A    (N)

Goal. Introduce T3P to copilot duties involved in long-range, over water navigation procedures.

Requirement. Review aircraft performance computations to include cruise profiles, fuel planning/monitoring, passenger and crew oxygen requirements, cargo considerations and over water emergency procedures. Pilot administrative duties involving aircraft deployment operations shall also be introduced.

Prerequisite. RQD-6110.

Performance Standard. The Pilot shall be familiar with the NATOPS Performance Manual, focusing on the different cruise profiles and appropriate application, and be proficient in the use of DOD FLIPs.

#### 4. Tactical Navigation (TN)

a. Purpose. To attain and maintain the Tactical Navigation Core Skill. Upon completion of this stage, the Pilot will be capable of single ship tactical ingress and egress to mission objective areas during day or night.

b. Crew Requirements. TN-2200 shall be instructed by a BIP. TN-2250 and TN-2251 shall be instructed by an NSI.

c. Academic/Ground Training. Utilize academic courseware as outlined in the MAWTS-1 Course Catalog and review MAWTS-1 ASPs, NFM and KC-130 ANTTP.

TN-2200	2.0	365	SC,R	1	KC-130	A	D
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Goal. Introduce the Pilot to day low-level navigation procedures.

Requirements. Initial event shall be instructed by a BIP. Plan and execute a VFR navigation route consisting of at least 6 points on a published MTR. Emphasize chart-to-ground interpretation and tactical pilotage. The route should terminate in an actual or simulated objective area requiring actions from IP inbound. The TSO shall be the primary navigator.

Prerequisite. RQD-6110.

Performance Standard. Arrive over the objective +/- 30 seconds; demonstrate an understanding of terrain masking, CRM, timing corrections, chart-to-ground interpretation, and low-level considerations/hazards.

External Syllabus Support. Approved Military Training Route (MTR) or restricted area.

TN-2250	2.0	365	SC,R	1	KC-130	A	NS
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Goal. Introduce the Pilot to NVD low-level navigation under HLL.

Requirement. The initial event shall be instructed by a NSI. Plan and execute a low-level navigation route consisting of at least 6 points on a published MTR. The route should terminate in an actual or simulated objective area requiring actions from IP inbound (either to a simulated airdrop or self-contained approach). Emphasize chart-to-ground interpretation and tactical pilotage while utilizing NVDs.

Performance Standard. Arrive over the objective +/- 30 seconds; demonstrate an understanding of terrain masking, CRM, timing corrections, chart-to-ground interpretation, and NVD considerations/hazards.

Prerequisite. NS-2150, TN-2200

External Syllabus Support. Approved MTR or restricted area.

TN-2251	2.0	180	SC,R	1	KC-130	A	NS
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Goal. Introduce the Pilot to NVD low-level navigation under LLL.

Requirement. The initial event shall be instructed by an NSI. Plan and execute a low-level navigation route consisting of at least 6 points on a published MTR. The route should terminate in an actual or simulated objective area requiring actions from IP inbound (either to a simulated airdrop or self-contained approach). The NSI shall discuss and introduce procedures and CRM required under LLL. Emphasize chart-to-ground interpretation and tactical pilotage while utilizing NVDs. Upon successful completion of this sortie and with the requisite NVD hours the Pilot will be NSQ.

Performance Standard. Arrive over the objective +/- 30 seconds; demonstrate an understanding of terrain masking, CRM, timing corrections, chart-to-ground interpretation, and LLL NVD considerations/hazards.

Prerequisite. NS-2151, TN-2250.

External Syllabus Support. Approved MTR or restricted area.

##### 5. Low Altitude Tactics (LAT)

a. Purpose. To attain and maintain the Low Altitude Tactics Core Skill. Upon completion of this stage, the Pilot will be capable of single ship low altitude ingress and egress to mission objective areas during the day.

b. General. General LAT rules of conduct (ROC) are contained in NAVMC 3500.14 and KC-130 specific LAT guidance is contained in the KC-130 ANTP. Non-LAT qualified Pilots conducting LAT training shall be instructed by a proficient LATI occupying the other Pilot seat. Pilots who lose proficiency in all LAT events lose their LAT qualification until they re-gain proficiency. The LAT qualification requirement consists of LAT-2260 and LAT-2261. Upon completion of LAT qualification requirements, Pilots shall be issued a LAT qualification letter from the squadron commanding officer.

c. Crew Requirements. Shall be instructed by a LATI or WTI.

d. Academic/Ground Training. Review the low level navigation and LAT chapters of the KC-130 ANTP. A squadron LATI or WTI shall administer KC-130 LAT 1, LAT 2, LAT Maneuvering, and KC-130 Stress and Performance Limitations from the MAWTS-1 KC-130 Specific Academic Support Package.

LAT-2260	2.0	180	SC,R	1	KC-130	A	D
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Goal. Demonstrate Pilot LAT procedures.

Requirements. The initial event shall be instructed by a LAT I. The LAT I shall demonstrate flying at comfort level,



terrain masking, ridgeline crossing, lookout doctrine, hard turns, break turns, bunts, jinks and IR threat reaction maneuvers. The route flown should afford the opportunity to perform LAT maneuvering, e.g. ridges, valleys, open areas and easily identifiable terrain features. The Pilot will focus on Pilot duties during this sortie.

Performance Standard. The Pilot must be capable of performing Pilot duties in the LAT environment to include tactical pilotage, secondary navigator, and CRM.

Prerequisite. TN-2200.

External Syllabus Support. LAT approved MTR or restricted area.

LAT-2261	2.0	180	SC,R	1	KC-130	A	D
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Goal. Introduce Pilot LAT procedures.

Requirements. The event shall be instructed by a LAT I. The LAT I shall introduce flying at comfort level, terrain masking, ridgeline crossing, lookout doctrine, hard turns, break turns, bunts, jinks and IR threat reaction maneuvers. The route flown should afford the opportunity to perform LAT maneuvering, e.g. ridges, valleys, open areas and easily identifiable terrain features. The Pilot will focus on Pilot duties during this sortie. Upon successful completion of TN-2261, the Pilot shall be considered LAT Qualified and may be issued an appropriate qualification letter by the squadron commanding officer.

Performance Standard. The Pilot must be capable of performing Pilot duties in the LAT environment to include tactical pilotage, secondary navigator, and CRM.

Prerequisite. TN-2260.

External Syllabus Support. LAT approved MTR or restricted area.

## 6. Formation (FORM)

a. Purpose. To attain and maintain the Formation Core Skill (Section and Division). Upon completion of this stage, the Pilot will be capable of flying in a section or division during high altitude tactical ingress/egress in day or night conditions.

c. Crew Requirements. Initial events other than NS shall be flown with a BIP. Initial NS formation training shall be flown with an NSI.

d. Academic/Ground Training. The instructor and student shall review the KC-130 ANTTP Formation chapter.

FORM-2300	2.0	365	SC,R	2	KC-130	A	D
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Goal. Introduce section formation procedures.

Requirement. The instructor shall introduce day section formation procedures, proper start, taxi, run-up, and takeoff procedures in a formation. Introduce management of all comm/nav equipment as associated with formation flight and proper formation communications procedures. Demonstrate day section formation positions and procedures, break-up/rendezvous and lead changes.

Performance Standard. The Pilot shall accurately describe formation positions and demonstrate the ability to operate as a KC-130 wingman. Attain and maintain the 45 degree bearing line while in the parade position on the left and right side of lead. Recognize excessive closure and safely execute the underrun procedure. Satisfactory completion of the maneuvers and procedures per the NFM and KC-130 ANTP.

Prerequisite. RQD-6110.

External Syllabus Support. Special Use Airspace (SUAS).

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FORM-2301	2.0	365	SC,R	3+ KC-130	A	(NS)
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Goal. Introduce division formation procedures.

Requirement. Initial event shall be during the day. The instructor shall introduce day or night division formation procedures, proper start, taxi, run-up, and takeoff procedures in a formation. Introduce management of all comm/nav equipment as associated with formation flight and proper formation communications procedures. Demonstrate day or night division formation positions and procedures, and lead changes.

Performance Standard. The Pilot shall be capable of applying proper corrective control inputs to establish and maintain dash 3 or 4 formation positions. The Pilot shall demonstrate knowledge of KC-130 division formation considerations.

Prerequisite. FORM-2300. (IF NS - FORM-2350, NSQ (2150, 2151, 2250, 2251 or flown with a NSI)).

External Syllabus Support. Special Use Airspace (SUAS).

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FORM-2350	2.0	365	SC,R	2 KC-130	A/S	NS
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Goal. Night formation procedures.

Requirement. Initial event shall be instructed by an NSI. The instructor shall review formation mission briefing requirements and demonstrate NVD formation positions and procedures, break-up and rendezvous and lead change. Introduce proper start, taxi, run-up, takeoff, recovery, and landing procedures in an NVD formation, review proper management of all comm/nav equipment as associated with formation flight and proper formation communications procedures.

Performance Standard. The Pilot shall accurately describe and demonstrate NVD formation positions, NVD considerations and be familiar with all applicable references.

Prerequisite. FORM-2300, NSQ (2150, 2151, 2250, 2251 or flown with a NSI).

External Syllabus Support. Special Use Airspace (SUAS).

7. Threat Reaction (TR)

a. Purpose. To attain and maintain the Threat Reaction (IR) Core Skill in a low to medium infrared (IR) threat environment. Upon completion of this stage, the Pilot will be capable of flying in a ground infrared threat environment during day or night.

b. General

(1) Pilots shall be introduced to the KC-130T ASE suite and mission planning considerations for IR SAM defense. The sortie should focus on aircrew immediate action drills when confronted with threat systems from both front and rear aspects under varying mission profiles.

(2) Aircraft must have an operational ASE suite that supports infrared (IR) threat reaction.

(3) Ordnance must be expended on all initial events. Subsequent events can be simulated.

(4) Appropriate ground threat emitters should be available.

c. Crew Requirements. Shall be instructed by a LATI or WTI.

d. Academic/Ground Training. Review the NFM, KC-130 ANTTP, Classified ANTTP, AFTTP 3-1 Threat Reference Guide. A WTI should administer the KC-130 ASE classes from the MAWTS-1 KC-130 Specific Academic Support Package.

TR-2400	2.0	365	SC,R	1	KC-130	A/S	(NS)
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Goal. Introduce the operational use of ASE and threat counter-tactics against small arms, AAA and IR SAM threat systems.

Requirement. Introduce the ASE counter measures dispensing system setup, missile warning system setup, jamming system, and threat reaction. The Pilot should be exposed to a variety of threat situations of increasing intensity using both the Automatic and Manual modes of the dispensing system. Threat reaction maneuvering should include the take-off, cruise and approach phases of flight.

Performance Standard. The Pilot should be able to correctly operate the aircraft's ASE suite in an IR SAM environment, and react timely and correctly to threat calls. Proper aircrew coordination shall be performed in threat reaction.

Prerequisite. LAT Qualified (2260, 2261), (If NS, then NSQ (2150, 2151, 2250, 2251))

Ordinance. 120 flare expendables (required for initial event).

External Syllabus Support. Appropriate counter-measures range, a Smokey SAM crew with a minimum of 5 Smokey SAMs, MWS stimulator team if available.

209. MISSION SKILL PHASE (3000)

1. General. The focus of the Mission Skill Phase is to train the Pilot in the skills required to meet the Marine Corps Tasks (MCT). These missions include: Assault Landing Zone (ALZ) operations, Air-to-Air Refueling (AAR), Rapid Ground Refueling (RGR) and Air Delivery (AD).

a. At the completion of this phase, the Pilot may be recommended for upgrade to Transport Plane Commander (TPC) by the APRB, complete the TPC upgrade syllabus, and be designated a TPC by the squadron commanding officer.

b. Pilots shall receive initial training by the appropriate instructor as delineated in the respective event. Once a Pilot has completed the initial event, subsequent events may be flown with proficient aircrew.

c. Pilots conducting initial Night Systems (NS) training shall be instructed by an NSI. Pilots should be designated NSQ prior to conducting any Mission Skill NS event.

d. While TPCs remain responsible for the conduct of the mission brief, T2Ps and T3Ps should be introduced to preparing and conducting briefs in this phase in preparation for upgrade.

2. Assault Landing Zone (ALZ)

a. Purpose. To attain and maintain the Mission Skill of operating from an ALZ. Upon completion of this stage, the Pilot will be capable of day or night ALZ operations and will be knowledgeable of unimproved ground operation considerations.

b. General

(1) The Pilot shall be introduced to day and NVD ALZ operations with an emphasis on visual and self-contained approach procedures, precision landings to short fields and ground operating procedures in the improved and unimproved environment.

(2) Dirt, grass, coral or any other unimproved surface requiring footprint loading analysis should be considered for unimproved ALZs.

(3) Emphasis in the unimproved environment is to introduce operating procedures designed to increase safety and reduce wear on the aircraft, footprint loading techniques, and airfield suitability services within the Marine Corps and DOD.

(4) For the purposes of this training syllabus, ALZ operations are defined as terminal area operations from an airfield prepared with either day or night EAF markings as defined in the KC-130 ANTTP. Ideally, MMT will be utilized for terminal control with tactical NAVAIDS available.

c. Crew Requirements. Initial ALZ events shall be flown from the left seat and instructed by a WTI or NSI.

d. Academic/Ground Training. Pilots should review the KC-130 ANTPP ALZ chapter, maximum effort performance calculations in the KC-130 NATOPS Performance Manual, and the ALZ class in the MAWTS-1 KC-130 Specific Academic Support Package.

ALZ-3500	2.0	365	SC,R	1	KC-130	A	D
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Goal. To fly day, improved ALZ operations.

Requirement. The Pilot shall conduct the ALZ mission brief and prepare a TOLD card for the mission per the NFM. The instructor shall introduce max effort takeoff and landing procedures, and EAF ground operating and taxi procedures. A minimum of 1 max-effort take-off/full-stop and 5 touch and go's shall be completed. Tactical checklists should be practiced and CRM emphasized during this event. A simulated or actual Combat Offload (COL) shall be conducted.

Performance Standard. The Pilot shall consistently land within the 500' touchdown zone and demonstrate the situational awareness to manage crew duties on approach to an ALZ and during departure.

Prerequisite. RQD-6100.

External Syllabus Support. Standard USMC ALZ day panel setup utilizing AMP-1, 2 or 3 markings. MMT or MWSS EAF personnel for terminal control, or USAF Special Tactics Team (SST).

ALZ-3501	2.0	365	SC,R	1	KC-130	A	(NS)
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Goal. Tactical Arrivals.

Requirement. This flight can be done in conjunction with ALZ-3500, ALZ-3550 or ALZ-3502. The Pilot shall introduce the random high, random low/shallow, IR cooled, and self-contained approaches. Emphasize terrain study with respect to ingress/egress of the terminal area and method of arrival based on threat. Discuss energy management.

Performance Standard. Satisfactory completion of the maneuvers and procedures per NFM and KC-130 ANTPP.

Prerequisite. RQD-6100.

External Syllabus Support. Standard USMC ALZ Day or IR lighting setup utilizing AMP-1, 2 or 3 markings. MMT or MWSS EAF personnel for terminal control.

ALZ-3502	2.0	730	R	1	KC-130	A	(NS)
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Goal. Train the Pilot to conduct flight operations at unimproved ALZ.

Requirement. The instructor shall review airfield assessment services available from MWSS and DOD. Discuss footprint loading/ground flotation determination and impacts on KC-130 operations. The Pilot shall conduct the ALZ mission brief and prepare a TOLD card for the mission per the NFM. The instructor shall introduce austere airfield ground and taxi procedures, max effort takeoff and landing procedures from an unimproved surface, and review ALZ approaches. Tactical checklists should be practiced and CRM emphasized during this event. A simulated or actual COL should be conducted during this event.

Performance Standard. The Pilot shall consistently land within the 500' touchdown zone, and demonstrate the situational awareness to manage crew duties on approach to an ALZ and during departure.

Prerequisite. ALZ-3500 (ALZ-3550 if NS).

External Syllabus Support. Standard USMC ALZ Day or IR lighting or day panel setup utilizing AMP-1, 2 or 3 markings. MMT or MWSS EAF personnel for terminal control.

ALZ-3550	2.0	180	R	1	KC-130	A	NS
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Goal. NVD ALZ operations.

Requirement. The Pilot shall conduct the ALZ mission brief and prepare a TOLD card for the mission per the NFM. The instructor shall introduce NS max effort takeoff and landing procedures, and practice improved EAF ground operating and taxi procedures. A minimum of 1 max-effort take-off/full-stop and 5 touch and go's shall be completed. NVD ALZ considerations/procedures and tactical checklists (max-effort, COL) should be reviewed. CRM shall be emphasized during this event. COL is optional.

Performance Standard. The Pilot shall consistently land within the 500' touchdown zone and demonstrate the situational awareness to manage crew duties on approach to an ALZ and during departure.

Prerequisite. ALZ-3500, NSQ (2150, 2151, 2250, 2251).

External Syllabus Support. Standard USMC ALZ IR lighting utilizing AMP-1, 2 or 3 markings. MMT or MWSS EAF personnel for terminal control.

### 3. Air-to-Air Refueling (AAR)

a. Purpose. To attain and maintain the Air-to-Air Refueling (AAR) Mission Skill. Upon completion of this stage, the Pilot will be capable of fixed wing, tilt rotor, and helicopter AAR operations in the day or night environment.

b. Crew Requirements. Initial AAR events shall be flown by the Pilot in the left seat and instructed by a Basic Instructor Pilot (BIP) with the

exception of AAR-3650 which shall be instructed by an NSI. One observer per operated refueling pod is required.

c. Academic/Ground Training. Utilize academic courseware as outlined in the MAWTS-1 Course Catalog and review MAWTS-1 ASPs, NFM, KC-130 ANTTP, and ATP-56(B).

AAR-3600	3.0	365	SC,R	1	KC-130	A	(N)
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Goal. FWAAR/TRAAR procedures.

Requirement. This event can be flown in either day or night conditions with NVDs optional. Conduct single tanker rendezvous procedures and receiver management. Discuss emergency procedures related with AAR. Focus on basic airwork and navigation/coordination to and from the refueling area. EMCON procedures should be introduced for the completion of the initial syllabus event.

Performance Standard. Satisfactorily demonstrate the ability to maintain a stable platform, maintain fuel state awareness and receiver management. Additionally, demonstrate knowledge of normal and emergency procedures, and CRM outlined in the KC-130 NFM, ANTTP and ATP-56B.

Prerequisite. RQD-6110.

External Syllabus Support. Fixed Wing or Tilt Rotor receiver aircraft and special use airspace.

AAR-3601	3.0	365	SC,R	1	KC-130	A	D
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Goal. Day Helicopter AAR (HAAR) procedures.

Requirement. This event shall be flown during the day. Fly a rotary-wing AAR mission, conducting a minimum of three (3) rendezvous'. Discuss emergency procedures related to AAR. Focus on basic airwork and navigation/coordination to and from the refueling area. If flown in conjunction with a low level route, plan for an ARCP, ARCT and ENDAR.

Performance Standard. Satisfactorily demonstrate the ability to effect the rendezvous, maintain a stable platform, maintain fuel planning awareness and receiver management. Additionally, demonstrate knowledge of normal and emergency procedures outlined in the NFM, ANTTP, and ATP-56B.

Prerequisite. RQD-6110.

External Syllabus Support. Helicopter receiver aircraft and special use airspace.

AAR-3650	3.0	180	SC,R	1	KC-130	A	NS
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Goal. NVD HAAR procedures.

Requirement. Conduct single tanker rendezvous procedures and receiver management. Fly a helicopter AAR mission conducting a minimum of three (3) rendezvous'. The initial event shall be instructed by a NSI. Discuss emergency procedures related to air-to-air refueling and NVD considerations. Focus on basic airwork and navigation/coordination to and from the refueling area. If flown in conjunction with a low level route, plan for an ARCP, ARCT and ENDAR.

Performance Standard. Satisfactorily demonstrate the ability to affect the rendezvous, maintain a stable platform, maintain fuel planning awareness and receiver management. Additionally, demonstrate knowledge of normal and emergency procedures outlined in the NFM, ANTTP, and ATP-56B.

Prerequisite. AAR-3601, NS-2150 (HLL), NS-2151 (LLL).

External Syllabus Support. Helicopter receiver aircraft and special use airspace.

#### 4. Rapid Ground Refueling (RGR)

a. Purpose. To attain and maintain the Rapid Ground Refueling Mission Skill. Upon completion of this stage, the Pilot will be capable of conducting Rapid Ground Refueling of aircraft and ground vehicles in any environment, day or night.

b. Crew Requirements. Initial RGR events shall be instructed by a Basic Instructor Pilot (BIP).

c. Academic/Ground Training. Pilots should review the KC-130 ANTTP RGR chapter and the RGR class in the MAWTS-1 KC-130 Specific Academic Support Package.

RGR-3660	0.0	730	SC,R	1 KC-130	A	(N)
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Goal. Introduce the Pilot to duties during RGR operations.

Requirement. Instructor shall demonstrate briefing requirements for RGR operations. Introduce personnel qualifications, duties, responsibilities and RGR crew coordination. Introduce RGR equipment, site weapons and passenger considerations, site configurations and threat considerations. Introduce RGR fuel planning, site setup, operation, and breakdown procedures, and NVD considerations during RGR operations (optional). If aircraft cockpit lighting is NVD compatible, (NS) applies.

Performance Standard. Pilot shall control receivers per the NFM and ANTTP. Integrate with loadmasters in mission planning; ensure that a tanker egress plan has been established and forecast winds are factored for receiver traffic pattern.

Prerequisite. RQD-6110.

External Syllabus Support. Crash/Fire/Rescue Support.



Receiver aircraft or ground vehicle (as appropriate).

5. Air Delivery (AD)

a. Purpose. To attain and maintain the Air Delivery Mission Skill. Upon completion of this stage, the Pilot will be capable of planning and executing an AD of cargo or static line personnel, day or night.

b. General. Initial AD event shall be actual drop of cargo, personnel or a combination. Subsequent updating of the event can be achieved by conducting a simulated drop.

c. Crew Requirements. Initial AD events shall be instructed by a Basic Instructor Pilot (BIP) with the exception of AD-3750 which shall be instructed by an NSI.

d. Academic/Ground Training. Review KC-130 ANTPP Air Delivery chapter, KC-130 Tactical Pocket Guide, and MAWTS-1 KC-130 Specific Academic Support Package.

AD-3700	2.0	365	SC,R	1 KC-130	A	D
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Goal. Train and evaluate the Pilot in day air delivery procedures.

Requirement. Review personnel, CDS, combination and HE air delivery procedures. The Pilot shall display a sound working knowledge of administrative and logistical requirements associated with DZ coordination and aircraft rigging (load certification). The Pilot shall demonstrate the ability to fly the ingress, objective area profile and manage checklists for AD procedures. Emphasis should be placed on CRM and AD procedures.

Performance Standard. Safely perform AD that lands within the drop zone safety criteria.

Prerequisite. RQD-6110.

External Syllabus Support. AD unit of any service for cargo rigging and DZ control.

AD-3750	2.0	365	SC,R	1 KC-130	A	NS
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Goal. Train and evaluate the Pilot in NS air delivery procedures.

Requirement. Review personnel, CDS, combination and HE air delivery procedures while on NVDs. The Pilot shall display a sound working knowledge of administrative and logistical requirements associated with DZ coordination and aircraft rigging (load certification). The Pilot shall demonstrate the ability to fly the ingress, objective area profile and manage checklists for AD procedures. Emphasis should be placed on CRM and AD procedures.

Performance Standard. Safely perform AD that lands within the drop zone safety criteria.

Prerequisite. AD-3700, NSQ (2150, 2151, 2250, 2251).

External Syllabus Support. AD unit of any service for cargo rigging and DZ control.

210. CORE PLUS SKILL PHASE (4000)

1. General. Upon completion of this phase of training, the Pilot will be qualified to plan and execute low level section formation operations, RADAR Threat Reaction (TR), Air-to-Air Defensive Tactics (DT), advanced Air Delivery (AD), and Battlefield Illumination (BI).

2. Tactical Navigation (TN)

a. Purpose. To attain and maintain the Core Plus Skill of TN Formation. Upon completion of this stage, the Pilot will be capable of flying as lead or -2 in a section formation in the low level/LAT environment. Emphasize low altitude formation techniques, formation control, tactical formations and mutual support in a low to medium threat environment.

b. Crew Requirements. The initial TN-4200 event shall be instructed by a Basic Instructor Pilot (BIP). The initial TN-4201 event shall be instructed by a LATI. The initial TN-4250 event shall be instructed by an NSI.

d. Academic/Ground Training. Review the Formation, Low Level Navigation and LAT Chapters of the KC-130 ANTP. Review LAT 1, LAT 2, LAT Maneuvering, and KC-130 Stress and Performance Limitations. These courses can be found in the MAWTS-1 KC-130 Specific Academic Support Package.

TN-4200	2.0	365	R	2	KC-130	A	D
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Goal. Introduce the Pilot to formation low-level procedures.

Requirement. The initial event shall be instructed by a Basic Instructor Pilot (BIP). This sortie shall be flown as a section. Plan and execute a VFR navigation route consisting of at least 6 points. The Pilot shall fly as a wingman. Emphasize terrain clearance and tactical formation positions and mutual support. The route should terminate in an actual or simulated objective area requiring actions from IP inbound (either to a simulated airdrop or self-contained approach). The initial sortie shall be conducted from the left seat.

Performance Standard. Demonstrate ability to fly a tactical formation while maintaining terrain clearance in the low level environment.

Prerequisite. TN-2200, FORM-2300

External Syllabus Support. Approved MTR or training area.

TN-4201	2.0	180	R	2	KC-130	A	D
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Goal. Introduce the Pilot to formation LAT.

Requirement. The initial event shall be instructed by a LATI. This sortie shall be flown as a section. Plan and execute a VFR navigation route consisting of at least 6 points. The Pilot shall fly as a wingman emphasizing terrain clearance and tactical formation positions while providing mutual support in a threat environment. The route should terminate in an actual or simulated objective area requiring actions from the IP inbound (either to a simulated AD or self-contained approach). The initial sortie shall be conducted from the left seat.

Performance Standard. Demonstrate the ability to fly in a tactical formation while maintaining terrain clearance in the LAT environment.

Prerequisite. TN-2261, TN-4200

External Syllabus Support. Approved MTR or training area.

TN-4250	2.0	180	R	2	KC-130	A	NS
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Goal. Introduce the Pilot to NS formation low-level procedures.

Requirement. The initial event shall be instructed by an NSI. This sortie shall be flown as a section. Plan and execute a VFR navigation route consisting of at least 6 points while on NVDs. The Pilot shall fly as a wingman. Emphasize terrain clearance and tactical formation positions and mutual support. The route should terminate in an actual or simulated objective area requiring actions from IP inbound (either to a simulated airdrop or self-contained approach). The initial sortie shall be conducted from the left seat.

Performance Standard. Demonstrate ability to fly a tactical formation while maintaining terrain clearance in the low level environment.

Prerequisite. Night Systems Qualified (2150, 2151, 2250, 2251), FORM-2350, TN-4200.

External Syllabus Support. Approved MTR or training area.

### 3. Threat Reaction (TR)

a. Purpose. To attain and maintain the Core Plus Skill of Threat Reaction (TR) in a RADAR threat environment. Upon completion of this phase, the Pilot will be capable of flying in a ground RADAR threat environment during day or night.

b. General

(1) Aircraft must have an operational ASE suite that supports radio frequency (RF) threat reaction.

(2) Appropriate chaff shall be loaded prior to flight.

(3) Appropriate ground threat emitters shall be available.

c. Crew Requirements. Shall be instructed by a LATI or WTI.

d. Academic/Ground Training. Review the NFM, KC-130 ANTP, Classified ANTP, AFTTP 3-1 Threat Reference Guide. A WTI should administer the KC-130 ASE classes from the MAWTS-1 KC-130 Specific Academic Support Package.

TR-4400                      2.0      365                      SC,R    1 KC-130    A/S    (NS)

Goal. Introduce surface RADAR threat during a tactical mission profile.

Requirement. Practice maneuvering the aircraft against surface-based threat emitters utilizing the RWR, and CMDS in conjunction with a tactical mission profile. Conduct multiple passes against simulated RADAR threat systems (from acquisition through target tracking to launch) and initiate appropriate maneuvers and countermeasures. Emphasis should be placed on configuration of the system for operations in a RADAR threat environment and CRM. IR threat reaction should also be practiced during this event.

Performance Standard. The Pilot shall demonstrate the ability to properly configure the CMDS for operations in a RADAR threat environment, and defend against RADAR acquisition, target tracking and launch sequences.

Prerequisite. LAT Qualified (2260, 2261), (If NS, then NSQ (2150, 2151, 2250, 2251))

Ordinance. 160 chaff, 120 flares.

External Syllabus Support. Approved emitter range or restricted area with mobile emitters available. SUAS authorized for expendables.

#### 4. Defensive Tactics (DT)

a. Purpose. To attain and maintain the Core Plus Skill of employing Defensive Tactics against an air threat by combining maneuver and use of the ASE suite. Upon completion of this stage, the Pilot will be capable of flying against 1 or 2 adversaries.

##### b. General

(1) Use of the Rear Vision Device (RVD) and ASE suite is recommended.

(2) Non-DT qualified Pilots or non-proficient DT Pilots who are conducting DT training shall be instructed by a DTI occupying the other Pilot seat.

(3) The DT qualification requirements consist of DT-4410 and DT-4411. Upon successful completion of qualification requirements, Pilots shall be issued a DT qualification letter from the squadron commanding officer.

c. Crew Requirements. Shall be instructed by a DTI. An additional member to utilize the RVD is recommended.

d. Academic/Ground Training. Review the KC-130 ANTP, Classified ANTP, and AFTP 3-1 Threat Reference Guide concerning air-to-air threats. Review the KC-130 ASE, DT, Stress & Performance Limitations and Threat Counter-tactics classes from the MAWTS-1 KC-130 Specific Academic Support Package.

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DT-4410            2.0    365            R    1 KC-130, 1 Adversary    A    D

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Goal. Train in defensive maneuvering in relation to an air-to-air threat. This sortie shall be flown as a 1 vs. 1.

Requirement. The DTI shall brief and introduce DT briefing requirements. Practice defensive maneuvers with emphasis on hard turns, break turns, maneuvering velocity, one-circle/two-circle fights and negating tracking solutions. The flight preparation for this event shall include threat analysis, ASE and expendable integration with regard to the threat, and a detailed aircrew brief on threat reaction throughout all phases of an attack. CRM shall be emphasized to include incorporation of the RVD, aircrew lookout doctrine/scan sectors and threat call template. An event debrief with the aggressor Pilot is recommended.

Performance Standard. The Pilot should demonstrate a working knowledge of A/A RADAR, A/A gun and IR missile defense and one-circle/two-circle considerations.

Prerequisite. LAT Qualified (2260, 2261), TR-4400.

Ordinance. 160 chaff, 120 flares.

External Syllabus Support. Single aggressor aircraft and approved airspace. SUAS authorized for expendables.

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DT-4411            2.0    365            R    1 KC-130, 2 Adversaries    A    D

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Goal. Train in defensive maneuvering in relation to an air-to-air threat. This sortie shall be flown as a 1 vs. 2.

Requirement. Practice defensive maneuvers with emphasis on hard turns, break turns, maneuvering velocity, one-circle/two-circle fights and negating tracking solutions. The flight preparation for this event shall include threat analysis, ASE and expendable integration with regard to the threat, and a detailed aircrew brief on threat reaction throughout all phases of an attack by a bogey section. CRM shall be emphasized to include incorporation of the RVD, aircrew lookout doctrine/scan sectors, threat call template and honoring the nearest threat. An event debrief with the aggressor flight lead is recommended.

Performance Standard. The Pilot should demonstrate knowledge of A/A RADAR, A/A gun and IR missile defense, one-circle/two-circle considerations and honoring the nearest threat.

Prerequisite. DT-4410.

Ordinance. 160 chaff, 120 flares.

External Syllabus Support. Two aggressor aircraft and approved airspace. SUAS authorized for expendables.

5. Air Delivery (AD)

a. Purpose. To attain and maintain the Core Plus Skill of Air Delivery (AD). Upon completion of this phase, the Pilot will be capable of planning and executing HALO/HAHO AD.

b. Crew Requirements. Shall be instructed by a BIP or NSI (if NS).

c. Academic/Ground Training. Review KC-130 ANTPP Air Delivery chapter and KC-130 Tactical Pocket Guide. Review MAWTS-1 AD courseware and OPNAV 3710.7\_ altitude requirements.

AD-4700            2.0    365                    R   1 KC-130   A   (N)

Goal. Train and evaluate the Pilot in personnel high altitude AD procedures.

Requirement. Plan and execute a Military Free Fall (MFF) AD operation. Perform mission analysis and planning of high altitude air delivery of personnel. Perform at least 1 HAHO or 1 HALO AD. Review applicable physiology and oxygen requirements for high altitude AD operations. Emphasize crew and jumpmaster coordination.

Performance Standard. Correctly identify the zone and safely perform an AD that lands within the drop zone safety criteria.

Prerequisite. AD-3700.

External Syllabus Support. Military free fall unit, appropriate DZ control and flight surgeon/physiologist if applicable.

6. Battlefield Illumination (BI)

a. Purpose. To attain and maintain the Mission Plus Skill of Battlefield Illumination (BI). Upon completion of this phase, the Pilot will be capable of planning and executing BI.

b. Crew Requirements. Shall be instructed by a BIP.

c. Academic/Ground Training. Utilize academic courseware as outlined in the MAWTS-1 course catalog and review MAWTS-1 ASPs, NFM, and KC-130 ANTPP.

BI-4710            2.0    \*            R            1 KC-130   A   N

Goal. Train the Pilot Battlefield Illumination (BI) procedures.

Requirement. Introduce BI procedures. Emphasize flare settings, illumination patterns, the conduct of a 9-Line brief, and emergency procedures. An actual expenditure of ordnance is required.

Performance Standard. Demonstrate knowledge of immediate action emergency procedures, and accurately fly the correct pattern for the type of illumination requested.

Prerequisite. AD-3700.

Ordinance. 15 LUU-2A/B, B/B or LUU-19 flares as required.

External Syllabus Support. SUAS authorized for aircraft parachute flares and illumination.

## 211. INSTRUCTOR TRAINING PHASE (5000)

1. General. The purpose of this phase of training is to train qualified Pilots to instruct various levels of instruction.

a. Pilots shall be recommended for instructor training via Aircrew Performance Review Board (APRB). Upon recommendation, the Pilot shall complete appropriate syllabus requirements. Upon completion of syllabus requirements, the commanding officer shall designate the Pilot as an instructor.

b. Standardization will be emphasized throughout instructor training.

c. Due to the lack of a FRS for the KC-130T community, Core Skill Introduction Instruction may occur at the fleet squadrons in accordance with NAVMC 3500.14. Fleet Replacement Squadron Instructors (FRSI) shall conduct this training.

### 2. Basic Instructor Pilot (BIP)

a. Purpose. To develop qualified Basic Instructor Pilots (BIPs) using a standardized instructor training program. This syllabus is designed to prepare aircraft commanders to instruct specific events. This portion of the syllabus shall be used by VMGR squadrons to assist in instructor standardization.

#### b. General

(1) A prospective BIP shall be a TPC that the APRB and commanding officer determine has the requisite airmanship and maturity to begin Pilot instruction. The TPC shall be Mission Skill phase complete and have a minimum of 100 TPC hours prior to being recommended by the APRB.

(2) The events a BIP may instruct are delineated in the individual event descriptions but are generally limited to AAR, FORM, and TN (non-LAT events).

(3) The commanding officer has the authority to designate an APRB approved BIP to instruct the tactical portion of the Core Skill Introduction Syllabus. The BIP will execute all takeoffs and landings required on these events.

(4) The BIP designation requires only 1 event. However, the commanding officer may elect to apply more stringent requirements to attain this designation.

(5) BIPs shall be designated in writing by the squadron commanding officer.

c. Crew requirements. Shall be instructed by an ANI or WTI.

d. Academic/Ground Training. The IUT shall review all directives pertinent to the safe conduct of flight to include the OPNAV 3710.7\_, Instrument Flight Manual, AIM/FAR, NFM, all tactics publications and local SOPs. The IUT shall be familiar with the T&R Program Manual and this NAVMC.

BIP-5100            3.0       \*            R   E            1 KC-130   A   (N)

Goal. Basic Instructor Pilot (BIP) evaluation.

Requirement. This event shall be flown in conjunction with a Core Skill or Mission Skill event with the IUT instructing a Pilot under the supervision of a qualified ANI or WTI. The IUT shall conduct the mission brief and execute the syllabus event in accordance with the event description. Upon completion of this event, the Pilot may be designated a BIP by the commanding officer.

Performance Standard. The IUT shall be evaluated on the ability to correctly brief the flight, demonstrate and introduce maneuvers in accordance with applicable directives, correct student deficiencies, conduct proper debrief and display appropriate subject matter expertise.

Prerequisite. RQD-6118, 100 hours TPC time, APRB recommendation.

External Syllabus Support. See appropriate Core Skill or Mission Skill stage description.

3. NATOPS Instructor/Assistant NATOPS Instructor (NI/ANI)

a. Purpose. Qualify IUT as a NATOPS Instructor/Assistant NATOPS Instructor (NI/ANI).

b. General. The purpose of this stage is to qualify the IUT as a NATOPS Instructor. The NI/ANI primarily conducts annual NATOPS and Instrument evaluations as well as administering the TPC Upgrade syllabus. The IUT shall be introduced to and practice compound aircraft emergencies from the right and left seat and shall be proficient in 2-engine emergency operations. The IUT shall be instructed on proper check-ride preparation, in-flight supervision of the aircraft and Pilot post-flight administrative requirements. Upon completion of the NI/ANI syllabus, the Pilot shall be designated an ANI or NI by the squadron commanding officer or designated the Group NATOPS Evaluator (GNE) by the group commanding officer.

c. Crew Requirements. NI-5140 shall be instructed by an ANI, NI, GNE, or Model Manager. NI-5141 shall be instructed by the NI, GNE, or Model Manager.

d. Academic/Ground Training. The IUT shall be familiar with all applicable OPNAV and NATOPS directives, with an emphasis on instrument and NATOPS normal and emergency procedures.



NI-5140      3.0    \*            E            1 KC-130   A   (N)

Goal.   NI/ANI training.

Requirement.   Introduce the IUT to the skills required to correct common student errors from the right seat.   Emphasize 3 and 2-engine aircraft approaches and landings, instructional techniques, check-ride preparation, aircraft/Pilot monitoring and post-check administrative duties.

Performance Standards

- 1) Demonstrate familiarity with common Pilot errors and instructional techniques.
- 2) Maintain proper defensive posturing to maintain safe flight.
- 3) Develop a script for a NATOPS/Instrument checkride sortie including:   precision and non-precision instrument approaches, 0%, 50% and 100% flap landings and ground/take-off/in-flight/landing emergencies.
- 4) Evaluated on instructional technique, check-ride preparation, aircraft monitoring and post-check administrative duties.

Prerequisite.   BIP-5100, APRB recommended.

NI-5141      3.0    \*            R   E            1 KC-130   A   (N)

Goal.   NI/ANI check.

Requirement.   Shall be instructed by a GNE/NI with the IUT in the right seat administering a NATOPS evaluation to a Pilot in the left seat.   The IUT shall be evaluated on instructional technique, check-ride preparation, aircraft/Pilot monitoring and post-check administrative duties.   A minimum of one 2-engine, no flap landing from the right seat shall be demonstrated by the IUT.   Upon completion of this event, the IUT may be designated a NI/ANI by the commanding officer.

Performance Standards

- 1) Demonstrate familiarity with common Pilot errors and instructional techniques.
- 2) Maintain proper defensive posturing to maintain safe flight.
- 3) Develop a script for a NATOPS/Instrument checkride sortie including:   precision and non-precision instrument approaches, 0%, 50% and 100% flap landings and ground/take-off/in-flight/landing emergencies.
- 4) Evaluated on instructional technique, check-ride preparation, aircraft monitoring and post-check administrative duties.

Prerequisite.   NI-5140.

4.   Fleet Replacement Squadron Instructor (FRSI)

- a.   Purpose.   Qualify ANI as a FRSI.

b. General. Upon completion of the FRSI syllabus a Pilot shall be designated an FRSI by the squadron commanding officer.

c. Crew Requirements. FRSI-5145 and FRSI-5146 shall be instructed by a FRSI, NI or GNE. FRSI-5147 shall be instructed by the NI or GNE.

d. Academic/Ground Training. Review NFM and KC-130 ANTP.

FRSI-5145      3.0      \*              E              1 KC-130      A      (N)

Goal. FRSI training.

Requirement. Instructor shall discuss instructional techniques, aircraft/Pilot monitoring, defensive posture, and common student errors. IUT in the left seat shall demonstrate the ability to maintain a safe training environment while conducting a simulated FAM-1105 and correcting common student errors as simulated by the instructor in the right seat.

Performance Standards

- 1) Demonstrate familiarity with common student errors and instructional techniques.
- 2) Maintain proper defensive posturing to maintain safe flight.
- 3) Demonstrate instructional proficiency in steep turns, 1-engine inoperative scenarios, 3-engine go-around procedures, takeoff aborts, and asterisked emergency procedures.

Prerequisite. NI-5141, 1000 hours in T/M/S, and APRB recommendation.

FRSI-5146      3.0      \*              E              1 KC-130      A      (N)

Goal. FRSI training.

Requirement. IUT in left seat shall conduct a Core Skill Introduction aircraft sortie with a student in the right seat that includes engine-out operations. The IUT shall maintain a safe training environment while correcting any student errors.

Performance Standard. Demonstrate competencies established in FRSI-5145.

Prerequisite. FRSI-5145.

FRSI-5147      2.0      \*              R      E              1 KC-130      A      (N)

Goal. FRSI check.

Requirement. IUT in left seat shall conduct a Core Skill Introduction tactical sortie with a student in the right seat. The flight shall be supervised by the GNE or NI. Upon completion of this event, the Pilot may be designated a Fleet Replacement Squadron Instructor (FRSI) by the squadron commanding officer.

Performance Standard. Demonstrate competencies established in FRSI-5145.

Prerequisite. FRSI-5146.

5. Flight Leadership Standardization Evaluator (FLSE)

a. Purpose. Certify IUT as a FLSE.

b. General. FLSEs ensure flight leadership standardization across all squadrons. The FLSE shall conduct a standardized evaluation of a prospective flight leader's ability to safely and effectively perform the duties as a flight lead. Prospective FLSEs shall complete the POI listed below. Upon completion of the POI, the squadron CO will nominate the prospective FLSE to the MAG CO for approval and designation. Designated FLSEs are required to complete annual standardization training with Program Coordinator.

c. Re-designation. FLSE re-designation criteria for aircrew that do not require Core Skill Introduction Refresher training is at the discretion of the MAG CO. For aircrew requiring Core Skill Introduction Refresher training, the minimum re-designation requirement for FLSE positions is successful completion of the associated T&R FLSE POI.

d. Crew requirements. Shall be instructed by the Wing FLSE Program Coordinator or the FLSE Model Manager.

e. Academic/Ground Training. The FLSE UT shall be familiar with all directives pertinent to formation and/or multi-plane refueling in the NFM, OPNAV 3710, FAR/AIM, ANTP, ATP-56(B), and local SOPs.

FLSE-5320      3.0      \*      R E      2+ KC-130 A (NS)

Goal. Certify the IUT to be designated a FLSE.

Requirement. Shall be instructed by the Program Coordinator with the FLSE under training (FLSE UT) administering a SL, DL, or RAC evaluation to Pilot under training. In addition to discussion items, the FLSE UT shall be evaluated on instructional technique and the standardization of related T&R POI items. A minimum of one rendezvous and recovery shall be executed. Flight should be flown in conjunction with a tactical mission. Upon completion of this event, the FLSE UT may be designated a FLSE by the MAG commanding officer.

Performance Standard. The FLSE UT shall demonstrate complete knowledge and understanding of self-paced readings and lectures in all formation and RAC POIs. The FLSE UT shall safely demonstrate the skills required to instruct and evaluate required maneuvers accurately, and correct common student errors to ensure standardization of the KC-130 FLSE program.

Prerequisite. RAC-6312 and DL-6305, and APRB recommendation.

External Syllabus Support. Program Coordinator.

6. Night Systems Instructor (NSI)

a. Purpose. To certify a KC-130T Pilot as an instructor capable of safely conducting ground and airborne instruction of the KC-130 Night Systems syllabus.

b. General. Refer to NAVMC 3500.14, MCO 3500.109 and the MAWTS-1 course catalog. The build-up phase may be developed and supervised by the Squadron NSI. Upon certification by MAWTS-1, the NSI shall be designated by the squadron commanding officer.

c. Crew requirements. Refer to the MAWTS-1 KC-130 Course Catalog.

d. Academic/Ground Training. Refer to the MAWTS-1 KC-130 Course Catalog.

NSI-5150            2.0            R   E            1 KC-130   A   NS

Requirement. Reference the MAWTS-1 KC-130 Course Catalogue for the NSI POI.

NSI-5151            2.0            R   E            1 KC-130   A   NS

Requirement. Reference the MAWTS-1 KC-130 Course Catalogue for the NSI POI.

NSI-5152            2.0            R   E            2 KC-130   A   NS

Requirement. Reference the MAWTS-1 KC-130 Course Catalogue for the NSI POI.

NSI-5153            2.0            R   E            1 KC-130   A   NS

Requirement. Reference the MAWTS-1 KC-130 Course Catalogue for the NSI POI.

7. Low Altitude Tactics Instructor (LATI)

a. Purpose. To certify a KC-130T Pilot as an instructor capable of safely conducting ground and airborne instruction of the KC-130 LAT syllabus.

b. General. Completion of the Core Skill and Core Plus LAT syllabus is a prerequisite. Refer to NAVMC 3500.14, MCO 3500.109, and the MAWTS-1 course catalog. The build-up phase may be developed and supervised by the Squadron LATI. Upon certification by the squadron WTI or MAWTS-1, the LATI shall be designated by the squadron commanding officer.

c. Crew requirements. Refer to the MAWTS-1 KC-130 Course Catalog.

d. Ground/Academic Training. Refer to MAWTS-1 KC-130 Course Catalog.

LATI-5210           2.0           R            E            1 KC-130   A   D

Requirement. Reference the MAWTS-1 KC-130 Course Catalog for the LATI POI.

LATI-5211      2.0      R      E      1 KC-130   A   D

Requirement. Reference the MAWTS-1 KC-130 Course Catalog for the LATI POI.

LATI-5212      2.0      R      E      2 KC-130   A   D

Requirement. Reference the MAWTS-1 KC-130 Course Catalog for the LATI POI.

LATI-5213      2.0      R      E      1 KC-130   A   D

Requirement. Reference the MAWTS-1 KC-130 Course Catalog for the LATI POI.

#### 8. Defensive Tactics Instructor (DTI)

a. Purpose. To certify the KC-130T Pilot as an instructor capable of safely conducting ground and airborne instruction of the KC-130 DT syllabus.

b. General. Refer to NAVMC 3500.14, MCO 3500.109 and the MAWTS-1 course catalog. Completion of the DT syllabus and be designated a LATI is a prerequisite. The build-up phase may be developed and supervised by the Squadron DTI. Upon certification by MAWTS-1, the DTI shall be designated by the squadron commanding officer.

c. Crew requirements. Refer to the MAWTS-1 KC-130 Course Catalog.

d. Academic/Ground Training. Refer to the MAWTS-1 KC-130 Course Catalog.

DTI-5410      1.0      R   E      1 KC-130   A   D

Requirement. Reference the MAWTS-1 KC-130 Course Catalogue for the DTI POI.

DTI-5411      1.0      R   E      1 KC-130   A   D

Requirement. Reference the MAWTS-1 KC-130 Course Catalogue for the DTI POI.

DTI-5412      1.0      R   E      2 KC-130   A   D

Requirement. Reference the MAWTS-1 KC-130 Course Catalogue for the DTI POI.

DTI-5413      1.0      R   E      1 KC-130   A   D

Requirement. Reference the MAWTS-1 KC-130 Course Catalogue for the DTI POI.

#### 9. Weapons and Tactics Instructor (WTI)

a. Purpose. Develop highly qualified Pilots into effective unit tactics instructors and expose them to current Marine Corps tactical doctrine. Additionally, this stage is designed to increase knowledge and experience of the capabilities and associated tasks of the KC-130.

b. General. Tactics and techniques will be taught per the KC-130 ANTPP and the MAWTS-1 supplements. Only MAWTS-1 instructors shall instruct/qualify flights in this stage. Qualification shall only be achieved as shown in the WTI Course Catalog. Upon certification by MAWTS-1, the WTI shall be designated by the squadron commanding officer.

c. Crew requirements. Refer to the MAWTS-1 WTI Course Catalog.

d. Academic/Ground Training. Refer to the MAWTS-1 WTI Course Catalog.

WTI-5999           \*       \*           E       KC-130   A

Requirement. Reference the MAWTS-1 KC-130 Course Catalog.

212. REQUIREMENTS, QUALIFICATIONS, DESIGNATIONS (RQD) PHASE (6000)

1. General. To provide a vehicle for tracking codes associated with certifications, qualifications and designations. E-coded sorties are evaluation sorties. Once the flight to attain the qualification/designation is complete, a letter from the squadron commanding officer awarding the qualification/designation shall be placed in the NATOPS jacket before that qualification/designation can be utilized.

2. Left Seat FAM

a. Purpose. Introduce left seat flight procedures and crew coordination.

b. Crew Requirements. Shall be instructed by an ANI.

RQD-6100           2.0           SC       1 KC-130   A   D

Goal. Left seat FAM (Qualification).

Requirement. The flight shall consist of 5 touch and go's and 1 full stop. Instruction shall include taxi procedures, ground emergencies, abort procedures, and 3 engine procedures to include 3 engine go-around and takeoff continued after engine failure. This event shall be instructed by an ANI.

Performance Standard.

- 1) Safely taxi the aircraft and perform aircraft reverse taxiing operations.
- 2) Properly execute abort procedures.
- 3) Safely land the aircraft in 50% and 100% flap landing configurations.

Prerequisite. 75 hours in T/M/S and APRB recommendation.

3. Functional Check Pilot (FCP)

a. Purpose. Designate the TPC as a FCP.

b. General. FCPs shall be designated by the commanding officer.

c. Crew Requirements. Shall be instructed by a BIP qualified PMCF Pilot.

d. Academic/Ground Training. Functional Check Flight Examination.

FCP-6106 2.0 SC,R E 1 KC-130 A D

Goal. FCP evaluation/designation.

Requirement. The flight shall consist of an "A" profile functional check flight and be instructed by a BIP qualified PMCF Pilot.

Performance Standard. Satisfactorily execute procedures per the NFM, OPNAVINST 3710.7\_\_, and OPNNAVINST 4790.2\_\_.

Prerequisite. TPC (6118), APRB recommendation.

4. KC-130T NATOPS Evaluation POI

a. Purpose. To evaluate the Pilot's knowledge of aircraft systems, performance limitations, emergency procedures, and flight and ground operations.

b. General

(1) NATOPS Instructors shall conduct the NATOPS evaluation in accordance with OPNAVINST 3710.7 series and other applicable directives, instructions, and orders.

(2) The NATOPS Instructor shall utilize the NATOPS Model Manager generated NATOPS Aviation Training Form (ATF) and the evaluation metrics required for the accomplishment and performance of the standardized criterion to determine whether the Pilot completed the sortie. Prior to the oral examination, the NATOPS Instructor shall review the NATOPS monthly emergency procedures examinations and quarterly simulator/cockpit drills for the previous twelve (12) months and previous NATOPS evaluations. At the discretion of the squadron commanding officer, a letter designating the Pilot as NATOPS qualified shall be placed in the NATOPS jacket.

(3) NATOPS Evaluatees shall complete and have a graded open book, closed book, and oral examination prior to the commencement of the actual NATOPS evaluation event.

NTPS-6010 3.0 365 SC,R E Open Book NATOPS Examination

Goal. The open book examination shall consist of, but not be limited to the question bank. The purpose of the open book examination is to evaluate the Pilot's knowledge of the appropriate publications and the aircraft.

Performance Standard. Achieve a minimum score of 3.5 on the open book examination.

NTPS-6011 1.0 365 SC,R E Closed Book NATOPS Examination

Goal. The purpose of the closed book examination is to evaluate the Pilot's knowledge of the concerning normal/emergency procedures and aircraft limitations.

Performance Standard. Achieve a minimum score of 3.3 on the closed book examination.

NTPS-6012      3.0      365      SC,R      E      Oral NATOPS Examination

Goal. The oral examination shall consist of, but not be limited to the question bank. The instructor may draw upon their experience to propose questions of a direct and positive manner and in no way be opinionated to evaluate the Pilot's knowledge of the concerning normal/emergency procedures, aircraft limitations, and performance.

Performance Standard. Achieve a minimum grade of qualified on the oral examination.

5. Transport Third Pilot (T3P) Designation

a. Purpose. Designate as a T3P.

b. General. After student Pilots have completed Core Skill Introduction Training and NATOPS check they shall be designated T3P by the squadron commanding officer.

c. Crew Requirements. Shall be instructed by an ANI/NI.

d. Ground Training/Evaluation. Open and closed book NATOPS examinations and the specific requirements for T3P designation per OPNAVINST3710.7\_.

NTPS-6110      3.0      365      SC      E      1 KC-130      A      (N)

Goal. Qualify as a Transport Third Pilot (T3P).

Requirement. ANI shall conduct T3P NATOPS evaluation flight. Emphasize right seat copilot duties to include comm/nav management, voice procedures, situational awareness and NATOPS/Instrument procedures. Basic, Transition, Series Conversion, and T3P Refresher Pilots shall be evaluated in the right seat. TPC and T2P Refresher Pilots should be evaluated in the left seat. Pilot should compute TOLD card.

Performance Standard. Per the NFM and OPNAVINST 3710.7\_\_.

Prerequisite. Core Skill Introduction phase complete, NATOPS open, closed and oral exam complete (NTPS-6010, 6011, 6012).

6. Transport Second Pilot (T2P) Designation

a. Purpose. Designate as a T2P.

b. General. Upon completion of the initial examination and evaluation, this flight will be used as the annual NATOPS evaluation and the Pilot shall be designated T2P by the squadron commanding officer.

c. Crew Requirements. Shall be instructed by an ANI/NI.

d. Ground Training/Evaluation. Open and closed book NATOPS examinations, open book tactics examination and the specific requirements for T2P designation per OPNAVINSTINST 3710.7\_. The written tactical examination will not be required for subsequent evaluations.



NTPS-6013      1.0      \*      SC    E      Open Book Tactics Examination

Goal. The purpose of the open book tactics examination is to evaluate the airman's knowledge of the appropriate publications concerning tactics, techniques and procedures of Core and Mission Skills.

Performance Standard. Achieve a minimum grade of 80% on the open book examination.

NTPS-6111      2.0      365      SC    E      1 KC-130    A    (N)

Goal. Qualify as a Transport Second Pilot (T2P).

Requirement. The T2P check shall be instructed by an ANI and shall be conducted with the Pilot in the right seat. Emphasize right seat copilot duties to include comm/nav management, voice procedures, situational awareness and NATOPS/Instrument procedures. This sortie should be flown in conjunction with a tactical mission. For Pilots who are already designated T2P, this event may be flown in the left seat.

Performance Standard. The Pilot shall perform copilot duties per the NFM and KC-130 ANTPP.

Prerequisite. Core Skill phase complete, ACPM-82XX Phase complete, NATOPS open, closed and oral exam complete, T2P Tactics exam complete (NTPS-6010, 6011, 6012, 6013), APRB recommendation.

## 7. Transport Plane Commander (TPC) Designation

a. Purpose. Designate as a TPC.

b. General. The TPC preparation syllabus is designed to prepare the Pilot to command a KC-130 and crew in all aspects of flight. Upon completion of the initial syllabus, NTPS-6118 will be used to track annual NATOPS evaluations and the Pilot shall be designated a TPC by the squadron commanding officer.

(1) The TPC preparation simulator syllabus (SNTPS-6112) introduces the Pilot to multiple, compound emergency scenarios and emphasizes landing the aircraft safely under 1 and 2-engine-out situations. It also provides a comprehensive review of crucial aircraft systems and limitations.

(2) The Proficiency Review Flights (PRFs) (NTPS-6113 to NTPS-6115) will be flown to screen T2Ps for upgrade. Each flight should be flown with a different ANI/NI.

(3) Upon successful completion of the TPC preparation simulator syllabus and PRF syllabus, the TPC shall have met the prerequisites for the TPC Route Check Evaluation (NTPS-6117) and TPC NATOPS Evaluation (RQD-6118).

c. Crew Requirements. Shall be instructed by an ANI/NI.

d. Ground Training/Evaluation. Pilots considered for TPC should be Core Skill and Mission Skill Phase complete, ACPM 83XX Phase complete, currency/flight time per NFM, and the specific requirements for TPC designation per OPNAVINST 3710.7\_.

SNTPS-6112	27.0	*	E	OFT/WST	S	(N)
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Goal. TPC Upgrade Preparation Simulator Syllabus.

Requirement. This is a tracking code to identify the completion of the TPC Upgrade Preparation Simulator Syllabus. The syllabus includes 9 simulator events. See the TPC Upgrade Preparation Simulator Syllabus Guide for individual event descriptions and requirements.

Performance Standard. Per the NFM.

Prerequisite. APRB recommendation.

NTPS-6113	3.0	*	E	1 KC-130	A	(N)
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Goal. Screen for TPC designation.

Requirement. Review engine start malfunctions, ground, normal and emergency procedures, stall series, GCA and ILS approach procedures, propeller malfunctions and emergency landings in all configurations.

Performance Standard. Per the NFM.

Prerequisite. NTPS-6112.

NTPS-6114	3.0	*	E	1 KC-130	A	(N)
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Goal. Screen for TPC designation.

Requirement. Review ground fires, hydraulic malfunctions, 3-engine circling approaches, no-flap landings, and aircraft limitations. Practice engine start malfunctions, ground normal and emergency procedures, GCA and ILS approach procedures, propeller malfunctions and emergency landings in all configurations. This event should be flown from the right seat.

Performance Standard. Per the NFM.

Prerequisite. NTPS-6113.

NTPS-6115	3.0	*	E	1 KC-130	A	(N)
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Goal. Screen for TPC designation.

Requirement. Review engine and electrical malfunctions, unusual attitude recovery, and partial panel/no gyro approaches. Practice engine start malfunctions, ground, normal and emergency procedures, GCA and ILS approach

procedures, propeller malfunctions and emergency landings in all configurations.

Performance Standard. Per the NFM.

Prerequisite. NTPS-6114.

NTPS-6117	8.0	*	E	1	KC-130	A	(N)
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Goal. TPC NATOPS Route Check evaluation.

Requirement. This event shall be conducted on a long range over water mission requiring the Pilot to review ICAO operations, aircraft cruise and drift-down performance, over water emergency procedures and cargo/passenger coordination. It is recommended the route evaluation be conducted during a multi-day mission to allow evaluation of the Pilot's ground duties and crew handling, to include billeting, aircraft parking and servicing and diplomatic clearance coordination.

Performance Standard. Per the NFM and OPNAVINST 3710.7\_\_.

Prerequisite. NTPS-6115.

NTPS-6118	2.0	365	SC,R	E	1	KC-130	A/S	(N)
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Goal. Complete TPC NATOPS flight evaluation. Conduct an objective evaluation of the Pilot's knowledge of mission planning, normal operating procedures (flight and ground), crew resource management, aircraft systems, performance criteria, emergency procedures, and debriefing. The focus is on normal and emergency procedures, not tactical execution. Emphasis shall be placed on the aforementioned items with the addition of local course rules, squadron SOP, and admin flight procedures. The NATOPS evaluation is intended to evaluate compliance with NATOPS procedures. The NATOPS evaluation is the means to measure the Pilot's efficiency in the execution of normal operating procedures and reaction to emergencies and malfunctions. The NATOPS evaluation process should be as much a learning tool and/or experience as it is an evaluation. A Pilot's initial TPC NATOPS check shall be flown in the aircraft.

Requirement. Conduct NTPS-6118 evaluation flight. Upon successful completion of this event, the instructor shall log the appropriate training code for tracking purposes. Demonstrate comprehensive knowledge and understanding of NATOPS, squadron SOP, and local course rules.

Performance Standard. Executes flight and ground operations safely IAW OPNAV 3710.7 Series, and KC-130T NATOPS. Complies with squadron SOP and local course rules.

Prerequisite. Core Skill and Mission Skill Phase should be complete, ACPM 83XX Phase complete, NATOPS open, closed and oral exam complete (NTPS-6010, 6011, 6012), and SNTPS-6112,

NTPS-6113, NTPS-6114, NTPS-6115, NTPS-6117, APRB  
recommendation.

8. Emergency Procedure Training

a. Purpose. Maintain quarterly emergency procedure training.

b. General. Emergency procedure training consists of a monthly EP exam and a quarterly EP simulator. In the event the simulator is unavailable, the EP review may be conducted in the cockpit either pre or post flight as a static event.

c. Crew Requirements. Emergency Procedure review events may be instructed by a ANI/NI, FRSI, or CSI.

NTPS-6120      1.0      90      SC,R      E      1 OFT/WST/KC-130      S/A      (N)

Goal. Emergency Procedure Review.

Requirement. This flight will review KC-130T emergency procedures and fulfills the requirement of quarterly EP simulator training per NAVMC 3500.14.

Performance Standard. Comply with KC-130T NFM Emergency Procedures.

9. NATOPS Instrument Evaluation POI

a. Purpose. Evaluate the Pilot's knowledge and application of NATOPS instrument procedures and techniques.

b. General. General policy, requirements, and prerequisites concerning NATOPS instrument evaluations are contained in OPNAVINST 3710.7, NFM, and the NIFM.

c. Crew Requirements. Shall be instructed by an ANI/NI.

d. Ground Training/Evaluation. Ground training and evaluation shall be conducted per OPNAVINST 3710.7, NFM, and NIFM.

INST-6030      8.0      365      SC,R      E      Instrument Ground School

Goal. The Instrument Ground School shall be an approved Commander Naval Air Forces (CNAF) approved syllabus and at a minimum cover the following topics:

- 1) Spatial disorientation.
- 2) CNO GPS Policy Statement and GPS fundamentals to include RNAV (GPS) and Required Navigation Performance (RNP).
- 3) Reduced Vertical Separation Minimums (RVSM) procedures.
- 4) Requirements and denial reports.
- 5) Use of non-DoD instrument approach/departure reports.
- 6) Use of non-DoD GPS NOTAMS systems (Jeppeson GPS NOTAMS and Databases).

Performance Standard. Achieve a minimum grade of qualified for Instrument Ground School which also encompasses the open book examination.

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INST-6031	3.0	365	SC,R	E	Oral NATOPS Instrument Examination
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Goal. The oral NATOPS instrument examination shall consist of, but not be limited to the question bank in addition to any subject listed for coverage in OPNAVINST 3710.7 series. The examination shall include questions on the following topics:

- 1) Pertinent Navy or Marine Corps regulations, orders, and instructions.
- 2) Pertinent parts of the Federal Aviation Regulations (FAR), other regulations, and/or aeronautical publications which are applicable.
- 3) Interpretation of weather information normally used in flight planning. The instructor may draw upon their experience to propose questions of a direct and positive manner and in no way be opinionated to evaluate the airman's knowledge of the NATOPS, NATOPS Instrument Flight Manual, FAR/AIM and/or aeronautical publications which are applicable, normal/emergency instrument ground and flight procedures, weather, aircraft limitations, and performance.

Performance Standard. Achieve a minimum grade of qualified on the oral NATOPS instrument examination.

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INST-6130	2.0	365	SC,R	E	1 KC-130 A/S (N)
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Goal. Complete standard instrument flight evaluation. Following completion of the ground evaluation events, a standard instrument flight/simulator evaluation event shall be flown and completed with a grade of "Qualified." Conduct an objective evaluation of the airman's knowledge of flight planning, filing, briefing, conduct of flight under normal operating conditions, emergency procedures, closing out flight plans, and debriefing.

Requirement. Conduct INST-6130, and designate Pilot per OPNAVINST 3710.7\_, NFM, and the NIFM. Upon successful completion of these events, the evaluator shall log the appropriate training code for tracking purposes.

Performance Standard. Executes flight and ground operations safely IAW OPNAV 3710.7 Series, Platform NATOPS, NATOPS Instrument Flight Manual, and training rules. All areas on the instrument flight evaluation are critical. An "Unsatisfactory" grade in any area shall result in an "Unsatisfactory" grade for the flight.

Prerequisite. INST-6030, INST-6031, and minimum experience per OPNAVINST 3710.7\_.

INST-6131 2.0 365 SC,R E 1 KC-130 A/S (N)

Goal. Complete special instrument flight evaluation. Following completion of the ground evaluation events, a special instrument flight/simulator evaluation event shall be flown and completed with a grade of "Qualified." Conduct an objective evaluation of the airman's knowledge of flight planning, filing, briefing, conduct of flight under normal operating conditions, emergency procedures, closing out flight plans, and debriefing.

Requirement. Conduct INST-6131, and designate Pilot per OPNAVINST 3710.7\_, NFM, and the NIFM. Upon successful completion of these events, the evaluator shall log the appropriate training code for tracking purposes.

Performance Standards. Executes flight and ground operations safely IAW OPNAV 3710.7 Series, Platform NATOPS, NATOPS Instrument Flight Manual, and training rules. All areas on the instrument flight evaluation are critical. An "Unsatisfactory" grade in any area shall result in an "Unsatisfactory" grade for the flight.

Prerequisite. INST-6030, INST-6031, INST-6130, and minimum experience per OPNAVINST 3710.7\_.

#### 10. Section Leader (SL) Designation

- a. Purpose. Prepare and certify the Pilot as a Section Leader (SL).
- b. General. The Pilot shall review section formations, multi-plane AAR formations, planned and inadvertent weather penetrations and section recovery techniques. One flight should be flown at night under NVD conditions. Upon completion of the evaluation flight, Pilots shall also log the proficiency code in order to track event proficiency. It is recommended that the Tactical RAC Qualification (RAC-6311) be conducted in conjunction with either SL-6300 or SL-6301.
- c. Crew Requirements. Shall be instructed by a section or division lead and certified by a FLSE.
- d. Academic Training. All requirements delineated in the matrix below shall be completed and tracked prior to the SL evaluation/certification event.

**SECTION LEADER (SL) MATRIX**

SELF PACED READINGS	DATE COMP
NATOPS FLIGHT MANUAL CH 14.2	
OPNAVINST 3710.7 CH 5.1.12 Formation Flying	
ANTTP 3-22.3-KC-130 CH 2.3.6 FWAAR Formation	
ANTTP 3-22.3-KC-130 CH 2.4.8 HAAR Formation	
ANTTP 3-22.3-KC-130 CH 4 Formation	
ANTTP 3-22.3-KC-130 CH 5.2.7 Formation Air Delivery	
ATP-56B Part 1 Para 406 Loss of Visual Contact	
ATP-56B Part 2 CH 2 Formation Procedures	
ATP-56B Part 3 CH 3 Formation HAAR Procedures	
ATP-56B Part 3 CH 4 Safety Procedures	

BRIEFING/CHALK TALK REQUIREMENTS	DATE COMP	INSTRUCTOR
Section Departures		
Section Formations		
Low-Altitude Formation		
Multi-Plane AAR Formations		
Planned Weather Penetration		
Inadvertent Weather Penetration		
Section Recoveries (Approaches/Overhead)		
NORDO Procedures		
SL Brief		
Section Debrief		
ADMINISTRATIVE FLIGHT REQUIREMENTS		
Formation Start, Taxi, Run-Up		
Section Takeoff		
Section Rendezvous		
Cruise/Parade Positions		
Under-run		
Cross-under		
Section Recovery		
TN/AD/AAR *		
Night Aided **		

\* One event shall be flown in conjunction with a tactical mission.

\*\* One event should be flown at night.

SL-6300 3.0 \* E 2 KC-130 A (NS)

Goal. Section Leader practice.

Requirement. This event shall be instructed by a designated SL. This event should be flown as part of tactical mission (AAR preferred). The SL UT shall conduct the formation leader brief, review formation start, taxi, run-up, takeoff, and recovery procedures under day and NVD conditions. Discuss flight leadership responsibilities, formation instructional techniques and common student error recognition and correction. Review proper management of all comm/nav equipment associated with formation flight and proper formation communications procedures.

Performance Standard

- (1) The SL UT shall successfully plan, brief and lead a section of KC-130s.
- (2) The SL UT shall successfully conduct a mission brief and debrief IAW the ANTP KC-130 Tactical Pocket Guide.
- (3) The SL UT shall successfully demonstrate thorough knowledge of the self-paced reading in the SL Matrix.
- (4) The SL UT shall successfully complete the maneuvers and procedures per the NFM, KC-130 ANTP, and OPNAVINST 3710.7.

Prerequisite. 100 flight hours as a TPC, two flights in wingman position as a designated TPC, SL academics complete, ACPM-8630, ACPM-8660, and APRB recommendation.

External Syllabus Support Requirements. Appropriate SUAS scheduled.

SL-6301      3.0      \*      R   E      2 KC-130   A   (NS)

Goal.   SL evaluation/certification.

Requirement.   This event shall be evaluated by a designated FLSE.   If SL-6300 did not include a tactical mission, then SL-6301 shall be flown in conjunction with a tactical mission.   The SL UT shall conduct the formation leader brief, review formation start, taxi, run-up, takeoff, and recovery procedures under day and NVD conditions.   Discuss flight leadership responsibilities, formation instructional techniques and common student error recognition and correction.   Review proper management of all avionics equipment associated with formation flight and proper formation communications procedures.   Upon completion, the Pilot may be designated a SL by the squadron commanding officer.

Performance Standard

- (1) The SL UT shall successfully plan, brief and lead a section of KC-130s.
- (2) The SL UT shall successfully conduct a mission brief and debrief IAW the ANTP KC-130 Tactical Pocket Guide.
- (3) The SL UT shall successfully demonstrate thorough knowledge of the self-paced reading in the SL Matrix.
- (4) The SL UT shall successfully complete the maneuvers and procedures per the NATOPS FLIGHT MANUAL, KC-130 ANTP, and OPNAVINST 3710.7=.

Prerequisite.   SL-6300.

External Syllabus Support Requirements.   Appropriate SUAS scheduled.

SL-6302      2.0      365      2 KC-130      A   (NS)

Goal.   SL proficiency.

Requirement.   To maintain SL proficiency a Pilot shall brief, lead, and debrief (or evaluate a prospective SL) the designated event in accordance with the mission performance standards for that event.

Prerequisite.   SL-6301.

#### 11. Division Leader (DL) Designation

a. Purpose.   Prepare and certify the Pilot for Division Leader (DL).

b. General.   During the workup stage for DL, 1 flight should be a multi-plane AAR evolution and one flight should be flown at night under NVD conditions in order to develop the prospective DL's flight leadership.   The Pilot shall review multi-plane AAR formations, planned and inadvertent weather penetrations and division recovery techniques.   DL-6303 shall be evaluated by a designated DL.   DL-6304 shall be evaluated by a FLSE.   The DL Matrix will be used to track academic and administrative training.   Upon completion of the evaluation flight Pilots shall also log the proficiency code in order to track event proficiency.   Upon certification, the DL shall be designated by the squadron commanding officer.



c. Crew Requirements. Shall be instructed by a division lead and certified by a FLSE.

d. Academic Training. All requirements delineated in the DL matrix shall be completed prior to the DL evaluation/certification event.

#### DIVISION LEADER MATRIX

SELF PACED READINGS		DATE COMP
NATOPS FLIGHT MANUAL CH 14.2		
OPNAVINST 3710.7 CH 5.1.12 Formation Flying		
ANTTP 3-22.3-KC-130 CH 2.3.6 FWAAR Formation		
ANTTP 3-22.3-KC-130 CH 2.4.8 HAAR Formation		
ANTTP 3-22.3-KC-130 CH 4 Formation		
ANTTP 3-22.3-KC-130 CH 5.2.7 Formation Air Delivery		
ATP-56B Part 1 Para 406 Loss of Visual Contact		
ATP-56B Part 2 CH 2 Formation Procedures		
ATP-56B Part 3 CH 3 Formation HAAR Procedures		
ATP-56B Part 3 CH 4 Safety Procedures		
BRIEFING/CHALK TALK REQUIREMENTS	DATE COMP	INSTRUCTOR
Formation Departures		
Division Formations		
Low-Altitude Formations		
Multi-Plane AAR Formations		
Planned Weather Penetration		
Inadvertent Weather Penetration		
Division Recoveries (Approaches/Overhead)		
NORDO Procedures		
Division Leader Brief		
Division Debrief		
ADMINISTRATIVE FLIGHT REQUIREMENTS		
Formation Start, Taxi, Run-Up		
Division Takeoff		
Division Rendezvous		
Cruise/Parade Positions		
Underrun		
Crossunder		
Division Recovery		
TN/AD/AAR *		
Night Aided **		

\* One event should be flown in conjunction with a multi-plane AAR mission.

\*\* One event should be flown at night.

DL-6303            3.0        \*            E            3+ KC-130    A        (NS)

Goal. Division Leader practice.

Requirement. This event shall be instructed by a designated DL. This event should be flown as part of a multi-plane AAR mission. The DL UT shall conduct the formation leader brief, review formation start, taxi, run-up, takeoff, and recovery procedures under day, night and NVD conditions. Review proper management of all comm/nav equipment associated with formation flight and proper formation communications procedures.

Performance Standard

- (1) The DL UT shall plan, brief, and lead a Division of KC-130s.
- (2) The DL UT shall conduct a mission brief and debrief IAW the ANTTP KC-130 Tactical Pocket Guide.
- (3) The DL UT shall demonstrate thorough knowledge of the self paced reading in the DL Matrix.
- (4) The DL UT shall satisfactory complete the maneuvers and procedures per the NFM, KC-130 ANTTP, and OPNAVINST 3710.7\_\_.

Prerequisite. Minimum of two flights as a designated SL, 200 flight hours as a TPC, DL academics complete, ACPM-8640, ACPM-8641, ACPM-8620, and APRB recommendation.

External Syllabus Support Requirements. Appropriate SUAS scheduled.

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DL-6304	3.0	*	R	E	3+ KC-130	A	(NS)
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Goal. DL evaluation/certification.

Requirement. This event shall be evaluated by a designated FLSE. If DL-6303 did not include a multi-plane AAR mission, then DL-6304 shall be flown in conjunction with a multi-plane AAR mission. The DL UT shall conduct the formation leader brief, review formation start, taxi, run-up, takeoff, and recovery procedures under day, night, and NVD conditions. Review proper management of all comm/nav equipment associated with formation flight and proper formation communications procedures. Upon completion of this event, the Pilot may be designated a DL by the squadron commanding officer.

Prerequisite. DL-6303.

Performance Standard

- (1) The DL UT shall plan, brief, and lead a Division of KC-130s.
- (2) The DL UT shall conduct a mission brief and debrief IAW the ANTTP KC-130 Tactical Pocket Guide.
- (3) The DL UT shall demonstrate thorough knowledge of the self paced reading in the DL Matrix.
- (4) The DL UT shall satisfactory complete the maneuvers and procedures per the NFM, KC-130 ANTTP, and OPNAVINST 3710.7\_\_.

External Syllabus Support Requirements. Appropriate SUAS scheduled.

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DL-6305	2.0	365			3+ KC-130	A	(NS)
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Goal. DL proficiency.

Requirement. To maintain DL proficiency, a Pilot shall brief, lead, and debrief (or evaluate a prospective DL) the designated event in accordance with the mission performance standards for that event.

Prerequisite. DL-6304.

## 12. Tactical Refueling Area Commander (TACRAC) Designation

a. Purpose. To attain and maintain the TACRAC skill for multi-plane, static orbit, air-to-air refueling operations. Upon completion of this phase, the Pilot will be capable of assuming the responsibilities of a Tactical Refueling Area Commander during a FW/TR/Helicopter AAR operation during day or night.

b. General. A designated TACRAC shall be capable of commanding a KC-130 refueling cell on a static-orbit tanker track to include fuel management and control of receivers in and around the tanker cell. The RAC-6311 evaluator shall be a designated a TACRAC and FLSE. Upon completion of the evaluation flight, Pilots shall also log the proficiency code in order to track event proficiency. At the discretion of the squadron commanding officer, a letter designating the Pilot as TACRAC shall be placed in the NATOPS jacket. This designation should be completed during the Pilot's SL training.

c. Crew Requirements. Shall be instructed and certified by a FLSE/TACRAC.

d. Academic Training. All requirements delineated in the TACRAC Matrix shall be completed and tracked prior to the TACRAC evaluation/certification event.

### **TACRAC MATRIX**

SELF PACED READINGS		DATE COMP
NATOPS FLIGHT MANUAL CH 14.1 IFR System		
NATOPS FLIGHT MANUAL CH 14.2 Formation Flight		
OPNAVINST 3710.7 CH 5.1.12 Formation Flying		
ANTTP 3-22.3-KC-130 CH 2.3.6 FWAAR Formation		
ANTTP 3-22.3-KC-130 CH 2.4.8 HAAR Formation		
ANTTP 3-22.3-KC-130 CH 4 Formation		
ATP-56B Part 1 Para 406 Loss of Visual Contact		
ATP-56B Part 2 CH 2 Formation Procedures		
ATP-56B Part 3 CH 3 Formation HAAR Procedures		
ATP-56B Part 4 CH 4 Safety Procedures		
BRIEFING/CHALK TALK REQUIREMENTS	DATE COMP	INSTRUCTOR
Air Refueling Limitations		
Multi-Plane AAR Formations		
Rendezvous Procedures		
Weather Considerations		
Planned Weather Penetration		
Inadvertent Weather Penetration		
Receiver Fuel Management		
NORDO Procedures		
Refueling Area Commander Brief		
Tanker Mgmt: TNKR Aborts		
Emergency Air Refueling Procedures		
ADMINISTRATIVE FLIGHT REQUIREMENTS	DATE COMP	INSTRUCTOR
OPARS		
ALTRV Procedures		
Rendezvous		
Refueling Formation Positions		
Radio Management/Voice Procedures		

RAC-6311            3.0    \*            R   E            2+ KC-130   A    (NS)

Goal.   TACRAC evaluation/certification.

Requirement.   This event shall be evaluated by a designated FLSE/TACRAC. Brief, conduct, and control a multi-tanker AAR mission. Discuss responsibilities of Flight Leader and Refueling Area Commander on a static orbit track. Focus should be on refueling formation integrity, receiver management, and fuel management for the entire flight.

Performance Standard

(1) The TACRAC under instruction shall successfully plan and brief the tanker and receiver force on all applicable procedures of the entire AAR evolution.

(2) The TACRAC under instruction shall successfully conduct a mission brief and debrief IAW the ANTP KC-130 Tactical Pocket Guide.

(3) The TACRAC under instruction shall successfully demonstrate thorough knowledge of the self paced reading in the TACRAC Matrix.

(4) The TACRAC under instruction shall successfully complete the maneuvers and procedures per the NFM, KC-130 ANTP, ATP-56(B) and OPNAVINST 3710.7\_\_.

Prerequisite.   Designated SL (SL-6301), TACRAC academics complete, (can be conducted in conjunction with SL-6300 or SL-6301).

External Syllabus Support.   Receiver aircraft.   Appropriate SUAS scheduled.

RAC-6312            2.0    365                            2+ KC-130   A    (NS)

Goal.   TACRAC proficiency.

Requirement.   To maintain proficiency as a TACRAC, a Pilot shall brief, lead, and debrief the designated event in accordance with the mission performance standards for that event.

Prerequisite.   RAC-6311

13.   Strategic Refueling Area Commander (STRATRAC) Designation

a.   Purpose.   To attain and maintain the long range formation air-to-air refueling skill. Upon completion of this phase, the Pilot will be capable of planning and executing long range over-water (multiple tanker) FW/TR/Helicopter AAR during day or night.

b.   General.   This designation qualifies the Pilot to act as RAC for extended over-water tanker missions. A detailed knowledge of both tanker and receiver fuel management, ALTRV scheduling facilities outlined in ATP-56(B), long-range navigation techniques, flight lead/rendezvous controller responsibilities and international flight operations is required. The RAC-6314 evaluator shall be a designated FLSE/STRATRAC. Commanders should select only the most skilled and experienced aircraft commanders for this designation. Upon completion of the evaluation flight Pilots shall also log the proficiency code in order to track event proficiency. At the discretion

of the squadron commanding officer, a letter designating the Pilot as STRATRAC shall be placed in the NATOPS jacket.

c. Crew Requirements. Shall be instructed and certified by a FLSE/STRATRAC.

d. Academic Training. All requirements delineated in the STRATRAC Matrix shall be completed prior to the STRATRAC evaluation/certification event.

#### STRATRAC MATRIX

SELF PACED READINGS		DATE COMP
NATOPS FLIGHT MANUAL CH 14.1 IFR System		
NATOPS FLIGHT MANUAL CH 14.2 Formation Flight		
OPNAVINST 3710.7 CH 5.1.12 Formation Flying		
ANTTP 3-22.3-KC-130 CH 2 Air-to-Air Refueling		
ANTTP 3-22.3-KC-130 CH 4 Formation		
ATP-56B Part 1 General Procedures		
ATP-56B Part 2 CH 2 Formation Procedures		
ATP-56B Part 3 CH 3 Formation HAAR Procedures		
Squadron Tactical Systems Operators SOP		
BRIEFING/CHALK TALK REQUIREMENTS	DATE COMP	INSTRUCTOR
Air Refueling Limitations		
Weather Considerations		
Tanker/Receiver Performance Data		
Multi-Plane AAR Formations		
Tanker/Receiver Fuel Management		
Control/Management of Receivers/Tankers		
Rendezvous Procedures		
Planned Weather Penetration		
Inadvertent Weather Penetration		
Contingency Planning		
Receiver to Hose Ratio		
Abort/Bingo Criteria		
Divert Planning		
NORDO Procedures		
Flight Lead/RAC/Rendezvous Controller Responsibilities		
Refueling Area Commander Brief		
Night Aided/Unaided		
Emergency Air Refueling Procedures		
ADMINISTRATIVE FLIGHT REQUIREMENTS	DATE COMP	INSTRUCTOR
OPARS		
ALTRV Procedures		
Rendezvous		
Radio Management/Voice Procedures		
International Flight Operations		

RAC-6314 6.0 \* R E 2+ KC-130 A (NS)

Goal. STRATRAC evaluation/certification.

Requirement. This event shall be evaluated by a designated FLSE/STRATRAC. Brief, conduct, and control a multi-tanker extended AAR mission. Discuss responsibilities of Refueling Area Commander, Flight Leader, and Rendezvous Controller.

Explain movement control, ALTRVs, abort criteria, hose factor, contingency planning, RAC functions, rendezvous control, weather recce, and path finding. Review radio procedures, NAVAID/RADAR/TCAS procedures, tanker/receiver management and emergency procedures related to AAR.

Performance Standards

- 1) Coordinate overall movement control planning effort to include: ORM analysis, ALTRV scheduling facilities/ALTRV requirements, route, tanker plan, logistics and divert contingencies.
- 2) Prepare and distribute flight planning products to all applicable tanker/receiver force participants; include: tanker plan, flight/route planning data and IMC penetration plan.
- 3) Conduct a formal movement briefing for all tanker and receiver force participants; include: route, go/no go criteria, tanker and receiver force rendezvous, refueling area, tanker plan, abort/bingo/ETP locations and criteria, communication, IMC penetration plan, bump plan, divert/contingencies, and logistics.
- 4) Rendezvous tanker force with receiver force as planned/briefed with due consideration given to changes in forecast weather, fuel planning and safety.
- 5) Ensure that all fuel transfer is in progress no later than planned/briefed abort points; otherwise direct receiver(s) to divert as applicable.
- 6) Ensure all AAR is conducted within appropriate airspace.
- 7) Perform all radio communications between tanker force and receiver force during refueling evolution(s).
- 8) Manage fuel offload of tanker aircraft according to mission planning, brief, economy and bingo considerations.
- 9) Manage receiver fueling according to mission planning, brief and divert considerations. Ensure receivers have adequate fuel to arrive at destination with required fuel reserve.
- 10) Direct planned/inadvertent weather penetration procedures if required for inclement weather.

Prerequisite. Designated DL (6304) and TACRAC (6311), STRATRAC academics complete, APRB recommendation.

External Syllabus Support. Appropriate ALTRV coordinated with ALTRV scheduling facilities and FW/TR/Helicopter receiver force.

RAC-6315	3.0	730	2+ KC-130	A (NS)
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Goal. STRATRAC proficiency.

Requirement. To maintain proficiency as a STRATRAC a Pilot shall brief, lead, and debrief the designated event in accordance with the mission performance standards.

Prerequisite. RAC-6314

213. AVIATION CAREER PROGRESSION MODEL (ACPM)

1. Purpose. To enhance professional understanding of Marine Aviation and the MAGTF and to ensure aviators possess the requisite skills to fill battle

command and battle staff positions in support of the ACE and the MAGTF in a joint environment. ACPM academic training requirements will be tracked and managed in M-SHARP. Commanding officers shall ensure the requisite ACPM training requirements have been met prior to designating flight leaders.

a. Stages. The following stages are included in the ACPM:

- (1) Core Skill Training Events
- (2) Mission Skill Training Events
- (3) Flight Leadership Training Events
  - (a) Section Leader
  - (b) Division Leader

2. ACPM Core Skill Training Events

a. Purpose. To provide and introduce basic integration of the ACE within the MAGTF and ACE Battle Staff planning.

b. General. The PUI must be qualified as a T3P prior to beginning this stage of training.

ACPM-8200      0.5      \*      MACCS Agencies, Functions, and Control of Aircraft and Missiles

Learning Objectives

- (1) Understand the organization of the MACG and the agencies provided by the MACG that form the MACCS.
- (2) Understand the mission and tasks of the Tactical Air Command Center (TACC).
- (3) Understand the mission and tasks of the Tactical Air Operations Center (TAOC).
- (4) Understand the mission and tasks of marine Air Traffic Control (MATC) and the marine Air Traffic Control Mobile Team (MMT).
- (5) Understand the mission and tasks of the Direct Air Support Center (DASC).
- (6) Understand the mission and tasks of the Low Altitude Air Defense (LAAD) Battalion.
- (7) Understand the mission and tasks of the Marine Unmanned Air Vehicle (VMU) squadron.
- (8) Understand the mission and tasks of the Marine Wing Communication Squadron (MWCS).

ACPM-8201      0.5      \*      MWCS Brief

Learning Objectives

- (1) From a list be able to identify the core competencies of the MWCS.
- (2) Without the aid of reference, describe the organization of the MWCS.

- (3) Without the aid of reference, identify key equipment used by the MWCS to support the MACCS.

ACPM-8202      0.8      \*      ACA and Airspace

Learning Objectives

- (1) List the three fundamental principles of airspace command and control.
- (2) List and explain the three tenets of the integrated combat airspace command and control system.
- (3) Describe the responsibilities of the ACA.
- (4) Describe the responsibilities of the AMCT.
- (5) Understand the definitions of Air Direction and Air Control as well as the subsets of those two major categories.
- (6) List a variety of items encompassed within the ACP.

ACPM-8210      0.7      \*      Aviation Ground Support

Learning Objectives

- (1) Identify the organization responsible for providing Aviation Ground Support (AGS) to the MAW.
- (2) Identify the four concepts for MAGTF Forward Operating Bases (FOBs).
- (3) Identify the five activities the Marine Wing Support Squadron (MWSS) performs for the ACE when deployed.
- (4) Identify the four classifications of FOBs and state the distinguishing characteristics of each.
- (5) Identify the fourteen functions of AGS.

ACPM-8230      1.0      \*      ACE Battle Staff

Learning Objectives

- (1) To introduce and explain the intel capabilities/products available to the ACE/MAGTF.
- (2) To introduce ALSA comm brevity terms.
- (3) Introduce functions and responsibilities of ACE Battle Staff.

ACPM-8231      1.0      \*      Battle Command Display

Learning Objectives

- (1) Introduce the Battle Command Display.

ACPM-8240      1.7      \*      Six Functions of Marine Aviation

Learning Objectives

- (1) To better understand the 6 functions of Marine Corps Aviation.



ACPM-8241      1.3      \*      JTAR/ASR Introduction and Practical Application

Learning Objectives

- (1) Understand the ATO cycle and the request process.
- (2) Write a technically correct JTAR.
- (3) Write a technically correct EW JTAR.
- (4) Write a technically correct EARF.
- (5) Write a technically correct ASR.
- (6) Track submitted air requests using various web-based programs.
- (7) Introduce the Automated Tracking System.

ACPM-8242      1.0      \*      Site Commander Primer

Learning Objectives

- (1) Introduce fundamentals and functions of Site Command.

ACPM-8250      0.8      \*      Theater Air Ground System (TAGS)

Learning Objectives

- (1) Identify the primary characteristics of TAGS.
- (2) Identify the primary surveillance agency within the Theater Air Control System.
- (3) Identify the element within the Army Air and Ground System responsible for integrating operational fires and synchronizing deep operations.
- (4) Identify the element within the Navy's Tactical Air Control System responsible for coordinating power projection.
- (5) Identify the commander within an amphibious task force who is subordinate to the Air Defense Commander (ADC) and responsible for the detection and engagement of hostile tracks in the AOA.
- (6) Identify the Marine Corps' contribution to overall Theater Air Ground System.

3. ACPM Mission Skill Training Events

a. Purpose. To provide and introduce basic integration of the ACE within the MAGTF and Joint environment.

b. General. The PUI must be qualified as a T3P prior to beginning this stage of training.

ACPM-8300      0.8      \*      Air Defense

Learning Objectives

- (1) Outline the principles of Air Defense.
- (2) Understand the composition of an Integrated Air Defense System (IADS).
- (3) Define Active and Passive Air Defense.

- (4) Identify the (4) primary pillars of Passive Air Defense operations.

ACPM-8310 0.8 \* Forward Arming Refueling Point (FARP) Operations

Learning Objectives

- (1) State the mission and objective of a FARP.
- (2) Explain the planning considerations of a FARP.
- (3) Explain the techniques of employment.
- (4) Describe the procedures necessary for movement of aircraft through a FARP and various layouts.

ACPM-8311 0.8 \* Marine Corps Tactical Fuel Systems

Learning Objectives

- (1) State the basic history of the Bulk Fuel community.
- (2) Identify the four major fuel systems and their capabilities.
- (3) State the job description of the Bulk Fuel Specialist.

ACPM-8320 1.0 \* Joint Structure & Joint Air Operations

Learning Objectives

- (1) Understand the criteria used by the Joint Force Commander (JFC) when selecting the Joint Forces Air Component Commander (JFACC).
- (2) Understand the duties and responsibilities of the five divisions of Joint Air and Space Operations Center (JAOC).
- (3) Know the types of sorties the MAGTF Commander must make available to the JFACC for tasking.
- (4) Understand the primary responsibilities of the Area Air Defense Commander (AADC).
- (5) Understand the purpose of the Airspace Control Order (ACO).
- (6) Become familiar with the six phases of the Joint Air Tasking Cycle.

ACPM-8321 0.3 \* Joint Air Tasking Cycle Phase 1: Strategy Development

Learning Objectives

- (1) Understand how the JFC normally provides air apportionment guidance to the Joint Forces Air Component Commander (JFACC).
- (2) Understand the air apportionment process.
- (3) Understand who drafts the AOD and what the AOD provides the JAOC.
- (4) Understand how objectives and tasks are prioritized.

Prerequisite. ACPM-8320.

ACPM-8322 0.3 \* Joint Air Tasking Cycle Phase 2: Target Development

Learning Objectives

- (1) Understand the purpose of the Joint Integrated Prioritized Target List (JIPTL).
- (2) Understand the purpose for the joint targeting coordination board and its participants.
- (3) Understand the target development process.
- (4) Know the product of phase 2 of the joint air tasking cycle.
- (5) Understand what provides the foundation for phase 2 of the joint air tasking cycle.

Prerequisite. ACPM-8321.

ACPM-8323 0.3 \* Joint Air Tasking Cycle Phase 3: Weaponing and Allocation

Learning Objectives

- (1) Understand weaponing and how it is conducted within the joint air tasking cycle.
- (2) Understand the Allocation Request Message (ALLOREQ) and how it is used in producing the MAAP.
- (3) Understand the air allocation process.
- (4) Understand the purpose of the MAAP team and what is contained in the MAAP.
- (5) Understand the purpose of the Sortie Allocation (SORTIEALLOT) message.

Prerequisite. ACPM-8322.

ACPM-8324 0.3 \* Joint Air Tasking Cycle Phase 4: Joint ATO Production

Learning Objectives

- (1) Understand the role of joint ATO production within the joint air tasking cycle.
- (2) Understand the responsibilities of the joint ATO production team.
- (3) Understand the processes used in the production of the joint air tasking order.
- (4) Understand how TBMCS 1.1.3 is used to produce the joint air tasking order.

Prerequisite. ACPM-8323.

ACPM-8325 0.3 \* Joint Air Tasking Cycle Phase 5: Force Execution

Learning Objectives

- (1) Understand the primary functions and responsibilities of the AOC.
- (2) Understand how the JAOC organizes for the execution phase.
- (3) Understand how TBMCS 1.1.3 is used during the execution phase.

Prerequisite. ACPM-8324.

ACPM-8326 0.3 \* Joint Air Tasking Cycle Phase 6: Combat Assessment

Learning Objectives

- (1) Understand the three inter-related components of combat assessment.
- (2) Understand the key factors concerning the three components of combat assessment.
- (3) Understand the purpose of BDA based upon current doctrine.
- (4) Understand physical damage, functional damage, and the target system assessment process.
- (5) Understand the purpose of the re-attack recommendation.

Prerequisite. ACPM-8325.

ACPM-8340 0.5 \* Integrating Fires & Airspace within the MAGTF

Learning Objectives

- (1) List the (14) Fire Support Principles.
- (2) Identify and discuss the (2) types of FSCMs.
- (3) Identify where most of the fire support coordination occurs within the MAGTF.
- (4) Discuss the purpose of ACMs.
- (5) Discuss the need for integrating FSCMs and ACMs.
- (6) Identify the required components of the JFA as an FSCM.
- (7) Identify the differences between the JFA and GARS.

ACPM-8350 0.8 \* Phasing Control Ashore

Learning Objectives

- (1) Identify the Navy agency most akin to the LF FSCC.
- (2) Identify what must be established ashore for control to be phased from the Navy TACC to the landing force.

ACPM-8351 1.0 \* TACRON Organizations and Functions

Learning Objectives

- (1) TBD

4. ACPM Flight Leadership Training Events

a. Purpose. To provide the prospective flight leader the concepts of basic integration of the MAGTF within the Joint environment.

b. General. Completion of Flight Leadership Training Events is required prior to the following flight leadership designations:

- (1) Section Leader: ACPM-8630, ACPM-8660.
- (2) Division Leader: ACPM-8640, ACPM-8641, ACPM-8620.

- (3) However, the PUI does not need to be in a specific flight leader syllabus in order to receive 8600 level training events.

ACPM-8630      1.0      \*      Tactical Air Command Center (TACC)

Learning Objectives

- (1) Without aid of references, identify the mission of the TACC.
- (2) Without aid of references, identify the major tasks/duties of the TACC.
- (3) Without aid of references, identify the three sections being supported by intelligence.
- (4) Without aid of references, identify the key TACC personnel and their responsibilities.
- (5) Without aid of references, identify the equipment associated with a full TACC capability.

ACPM-8660      0.4      \*      Joint Ops Introduction

Learning Objectives

- (1) Understand Joint Operation Command relationships.
- (2) Understand the main responsibilities for each Functional Component Commander.

ACPM-8640      0.8      \*      Joint Data Network

Learning Objectives

- (1) Understand the four components of the JDN.
- (2) Understand the differences between the Single Integrated Air Picture (SIAP), Common Tactical Picture (CTP), and Common Operational Picture (COP).
- (3) Understand the differences between Sensor Network(s), Joint Data Network (JDN), and Joint Planning Network (JPN).
- (4) Understand how the ACE builds its CTP and how information is shared throughout the ACE and the Marine Air Command and Control System (MACCS).
- (5) Know the primary system that will "tie in" the intelligence flow throughout the Marine Aviation Command and Control System (MACCS).

ACPM-8641      1.3      \*      MAGTF Theater and National ISR Employment

Learning Objectives

- (1) Define priority intelligence requirement.
- (2) Identify basic tenets of the National Imagery Interpretability Rating Scale.
- (3) Recognize strengths and weaknesses of the EO, SAR, and IR sensors found on national satellites.
- (4) Know the three categories of SIGINT.
- (5) Identify the information requirements used in the UAS planning process.

- (6) Identify what effective planning of UAS employment involves.
- (7) Identify key planning considerations outlined for UAS employment.
- (8) Define "Non-Traditional ISR".
- (9) Identify the most common shortfalls on JTARS submitted for NTISR support.
- (10) Identify the most common shortfalls on JTARS submitted for ATARS support.
- (11) Identify different imagery products ATARS can provide.

ACPM-8620      1.0      \*      ESG/CSG Integration

Learning Objectives

- (1) TBD

214. T&R SYLLABUS MATRIX

KC-130T PILOT													
1000 CORE SKILL INTRODUCTION PHASE													
STAGE	TRNG CODE	EVENT DESC	FLIGHT HOURS	SIMULATOR HOURS	REFLY INTERVAL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVALUATION	CHANNING	EVENT CONVERSION
FAMILIARIZATION (FAM)													
SFAM	1001	SIM-EXPANDED CHECKLIST UP TO T/O		2.0	*	S		D			E		001
SFAM	1002	SIM-EXPANDED CHECKLIST T/O TO SECURE		2.0	*	S		D	1001		E		002
SFAM	1003	SIM-START MALFUNCTIONS		2.0	*	S		D	1002		E		003
SFAM	1004	SIM-GROUND EMERGENCIES		2.0	*	S		D	1003		E		004
SFAM	1005	SIM-STAGE REVIEW; CHECKLISTS,EPs		2.0	*	S		D	1004	R	E		005
SFAM	1006	SIM-PROPELLER MALFUNCTIONS		4.0	*	S		D	1005		E		006
SFAM	1007	SIM-STEEP TURNS, STALLS		4.0	*	S		D	1006		E		007
SFAM	1008	SIM-GCA APP, ELECTRICAL SYSTEMS		4.0	*	S		D	1007		E		008
SFAM	1009	SIM-PRECISION APP, BLEED AIR SYSTEMS		4.0	*	S		D	1008		E		009
SFAM	1010	SIM-NONPRECISION APP, FUEL SYSTEMS		4.0	*	S		D	1009		E		010
SFAM	1011	SIM-HIGH APP, PENETRATION, HYDRAULICS		4.0	*	S		D	1010		E		011
SFAM	1012	SIM-ENGINE OUT APPROACHES		4.0	*	S		D	1011	R	E		012
SFAM	1013	SIM-TWO ENGINE APPROACH, PART PANEL		4.0	*	S		D	1012	R	E		013
SFAM	1014	SIM-STAGE REVIEW; BOLD FACE EPs		2.0	*	S		D	1013	R	E		014
FAM	1100	VFR PATTERN, STEEP TURNS, STALLS	3.0		*	A	1	D	1014		E		100
FAM	1101	INSTRUMENT FLIGHT PROCEDURES, OIL SYS	3.0		*	A	1	D	1100	R	E		101
FAM	1102	PRECISION APPROACHES, BLEED AIR SYS	3.0		*	A	1	N*	1101		E		102
FAM	1103	NON-PRECISION APPROACHES, HYDRAULICS	3.0		*	A	1	(N*)	1102	R	E		103
FAM	1104	HOLDING, CIRCLING APPROACHES	3.0		*	A	1	D	1103		E		104
FAM	1105	ENGINE OUT OPS, PREC APP, PROPS	3.0		*	A	1	N*	1104	R	E		105
FAM	1106	ENGINE OUT OPS, NON-PREC APP, ELEC	3.0		*	A	1	D	1105		E		106
FAM	1107	IN FLIGHT EPs, DEMONSTRATE 2-ENGINE	3.0		*	A	1	D	1106	R	E		107
FAM	1108	PARTIAL PANEL, NO GYRO APPROACHES	3.0		*	A	1	N*	1107		E		108
FAM	1109	STAGE REVIEW	3.0		*	A	1	(N*)	1108	R	E		109
			30.0	44.0									
LONG RANGE NAVIGATION (LRN)													
LRN	1160	LONG RANGE NAVIGATION PROCEDURES	16.0		*	A	1	(N*)	1105		E		151
			16.0										
TACTICAL NAVIGATION (TN)													
TN	1200	TACTICAL NAVIGATION PROCEDURES	2.0		*	A	1	D	1105		E		120
			2.0										
FORMATION (FORM)													
FORM	1300	BASIC FORMATION	2.0		*	A	2	D	1105		E		130
			2.0										
AIR-TO-AIR REFUELING (AAR)													
AAR	1600	FWAAR PROCEDURES	3.0		*	A	1	(N*)	1105		E		110
AAR	1601	HAAR PROCEDURES	3.0		*	A	1	D	1105		E		111
			6.0										
CORE SKILL INTRODUCTION EVALUATION													
CK	1800	NATOPS/INTRUMENT CHECK	2.0		*	A	1	(N*)	1109	R	E		190
			2.0										
			58.0	44.0									

KC-130T PILOT													
2000 CORE SKILL PHASE													
STAGE	TRNG CODE	EVENT DESCR	FLIGHT HOURS	SIMULATOR HOURS	REFLY INTERVAL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVALUATION	CHAINING	EVENT CONVERSION
NIGHT SYSTEMS (NS)													
NS	2150	HLL NSFAM	2.0		365	A	1	NS	6110	SC,R			204
NS	2151	LLL NSFAM	2.0		180	A	1	NS	2150	SC,R		2150	205
			4.0										
LONG RANGE NAVIGATION (LRN)													
LRN	2160	LRNAV	8.0		365	A	1	(N)	6110	SC,R			250
			8.0										
TACTICAL NAVIGATION (TN)													
TN	2200	TACNAV	2.0		365	A	1	D	6110	SC,R			320
TN	2250	HLL NSLL	2.0		365	A	1	NS	2150, 2200	SC,R		2200	323
TN	2251	LLL NSLL	2.0		180	A	1	NS	2151, 2250	SC,R		2200, 2250	324
			6.0										
LOW ALTITUDE TACTICS (LAT)													
LAT	2260	LAT	2.0		180	A	1	D	2200	SC,R		2200	321
LAT	2261	LAT	2.0		180	A	1	D	2260	SC,R		2260, 2200	322
			4.0										
FORMATION (FORM)													
FORM	2300	SECTION FORM	2.0		365	A	2	D	6110	SC,R			330
FORM	2301	DIVISION FORM	2.0		365	A	3	(NS)	2300, (IF NS - 2350, (2150, 2151, 2250, 2251 OR NSI REQ))	SC,R		2300, (IF NS - 2350, 2150HLL, 2151LLL)	332
FORM	2350	NS FORM	2.0		365	A	2	NS	2300, (2150, 2151, 2250, 2251 OR NSI REQ)	SC,R		2300, 2150(HLL), 2151(LLL)	331
			6.0										
THREAT REACTION (TR)													
TR	2400	IR TR	2.0		365	A/S	1	(NS)	LATQ (2260, 2261), (IF NS - 2150, 2151, 2250, 2251)	SC,R		2261	261
			2.0										
			30.0										



KC-130T PILOT													
3000 MISSION SKILL PHASE													
STAGE	TRNG CODE	EVENT DESC	FLIGHT HOURS	SIMULATOR HOURS	REFLY INTERVAL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVALUATION	CHAINING	EVENT CONVERSION
ASSAULT LANDING ZONE (ALZ)													
ALZ	3500	IMPROVED ALZ	2.0		365	A	1	D	6100	SC,R			370
ALZ	3501	TACTICAL ARRIVALS	2.0		365	A	1	(NS)	6100	SC,R		3500	370
ALZ	3502	UNIMPROVED ALZ	2.0		730	A	1	(NS)	3500, (3550 IF NS)	SC,R		3500	373
ALZ	3550	NVD ALZ	2.0		180	A	1	NS	3500, NSQ (2150, 2151, 2250, 2251)	SC,R		3500, 3501, 2150(HLL), 2151(LLL)	371
			8.0										
AIR-TO-AIR REFUELING (AAR)													
AAR	3600	FWAAR/TRAAR	3.0		365	A	1	(N)	6110	SC,R			311
AAR	3601	DAY HAAR	3.0		365	A	1	D	6110	SC,R			312
AAR	3650	NVD HAAR	3.0		180	A	1	NS	3601, 2150(HLL), 2151(LLL)	SC,R		3601, 2150(HLL), 2151(LLL)	313
			9.0										
RAPID GROUND REFUELING (RGR)													
RGR	3660	RGR	0.0		730	A	1	(N)	6110	SC,R			274
			0.0										
AIR DELIVERY (AD)													
AD	3700	AD	2.0		365	A	1	D	6110	SC,R			340
AD	3750	NS AD	2.0		365	A	1	NS	3700, NSQ (2150, 2151, 2250, 2251)	SC,R		3700, 2150(HLL), 2151(LLL)	341
			4.0										
			21.0										

KC-130T PILOT													
4000 CORE PLUS SKILLS PHASE													
STAGE	TRNG CODE	EVENT DESC	FLIGHT HOURS	SRGCH SIMULATIONS HOURS	REFLY INTERVAL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVALUATION	CHAINING	EVENT CONVERSION
TACTICAL NAVIGATION (TN)													
TN	4200	SEC TN	2.0		365	A	2	D	2200,2300	R		2200,2300	420
TN	4201	SEC LAT	2.0		180	A	2	D	2261,4200	R		2200,2261,2300,4200	421
TN	4250	NS SEC TN	2.0		180	A	2	NS	2150,2151,2250, 2251,2350,4200	R		2150(HLL),2151(LLL), 2350,4200	423
			6.0										
THREAT REACTION (TR)													
TR	4400	RF TR	2.0		365	A/S	1	(NS)	LATQ (2260, 2261), (IF NS - 2150, 2151, 2250, 2251)	SC,R		2400, 2261	361
			2.0										
DEFENSIVE TACTICS (DT)													
DT	4410	1V1	2.0		365	A	1	D	2260, 2261, 4400	R		2261	462
DT	4411	1V2	2.0		365	A	1	D	4410	R		2261,4410	463
			4.0										
AIR DELIVERY (AD)													
AD	4700	HALO, HAHO	2.0		365	A	1	(N)	3700	R		3700, 2150(HLL), 2151(LLL)	442
			2.0										
BATTLEFIELD ILLUMINATION (BI)													
BI	4710	BI	2.0		*	A	1	N	3700	R		3700	444
			2.0										
			16.0										

KC-130T PILOT													
5000 INSTRUCTOR TRAINING PHASE													
STAGE	TRNG CODE	EVENT DESC	FLIGHT HOURS	SIMULATOR HOURS	REFLY INTERVAL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVALUATION	CHAINING	EVENT CONVERSION
BASIC INSTRUCTOR PILOT (BIP)													
BIP	5100	BIP	3.0		*	A	1	(N)	6118, 100 hours TPC time, APRB recommended	R	E		520
			3.0	0.0									
NATOPS INSTRUCTOR (ANI/SNI/NE)													
NI	5140	ANI,NI	3.0		*	A	1	(N)	5100, APRB recommended		E		591
NI	5141	ANI,NI CK	3.0		*	A	1	(N)	5140	R	E		592
			6.0	0.0									
FLEET REPLACEMENT SQUADRON INSTRUCTOR (FRSI)													
FRSI	5145	FRSI	3.0		*	A	1	(N)	5141, 1000 hours in T/M/S, APRB recommended		E		500
FRSI	5146	FRSI	3.0		*	A	1	(N)	5145		E		501
FRSI	5147	FRSI CK	2.0		*	A	1	(N)	5146	R	E		502
			8.0	0.0									
FLIGHT LEADERSHIP STANDARDIZATION EVALUATOR (FLSE)													
FLSE	5320	FLSE	3.0		*	A	2	(NS)	6305, 6312, APRB recommendation.	R	E		593
			3.0	0.0									
NIGHT SYSTEMS INSTRUCTOR (NSI)													
NSI	5150	NSI	2.0		*	A	1	NS	MAWTS-1 COURSE CATALOG	R	E		550
NSI	5151	NSI	2.0		*	A	1	NS	MAWTS-1 COURSE CATALOG	R	E		551
NSI	5152	NSI	2.0		*	A	2	NS	MAWTS-1 COURSE CATALOG	R	E		552
NSI	5153	NSI	2.0		*	A	1	NS	MAWTS-1 COURSE CATALOG	R	E		553
			8.0	0.0									
LOW ALTITUDE TACTICS INSTRUCTOR (LATI)													
LATI	5210	LATI	2.0		*	A	1	D	MAWTS-1 COURSE CATALOG	R	E		530
LATI	5211	LATI	2.0		*	A	1	D	MAWTS-1 COURSE CATALOG	R	E		531
LATI	5212	LATI	2.0		*	A	2	D	MAWTS-1 COURSE CATALOG	R	E		532
LATI	5213	LATI	2.0		*	A	1	D	MAWTS-1 COURSE CATALOG	R	E		533
			8.0	0.0									
DEFENSIVE TACTICS INSTRUCTOR (DTI)													
DTI	5410	DTI	1.0		*	A	1	D	MAWTS-1 COURSE CATALOG	R	E	4410	540
DTI	5411	DTI	1.0		*	A	1	D	MAWTS-1 COURSE CATALOG	R	E	4410	541
DTI	5412	DTI	1.0		*	A	2	D	MAWTS-1 COURSE CATALOG	R	E	4411	542
DTI	5413	DTI	1.0		*	A	1	D	MAWTS-1 COURSE CATALOG	R	E	4410	543
			4.0	0.0									
WEAPONS TACTICS INSTRUCTOR (WTI)													
WTI	5999	WTI	*		*				MAWTS-1 COURSE CATALOG		E		699
			0.0	0.0									
			40.0	0.0									

KC-130T PILOT													
6000 REQUIREMENTS / QUALIFICATIONS / DESIGNATIONS PHASE													
STAGE	TRNG CODE	EVENT DESC	FLIGHT HOURS	SIMULATOR HOURS	REFLY INTERVAL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVALUATION	CHAINING	EVENT CONVERSION
LEFT SEAT FAMILIARIZATION													
RQD	6100	LS QUAL	2.0		*	A	1	D	75 hours in T/M/S, APRB rec	SC			680
POST MAINTENANCE CHECK FLIGHT PILOT (FCP)													
FCP	6106	FCF	2.0		*	A	1	D	6118, APRB recommendation	SC,R			687
			4.0	0.0									
NATOPS (NTPS)													
NTPS	6010	OPEN BOOK			365					SC,R	E		
NTPS	6011	CLOSED BOOK			365					SC,R	E		
NTPS	6012	ORAL EXAM			365					SC,R	E		
NTPS	6013	TACTICS EXAM			*					SC	E		
NTPS	6110	T3P	3.0		365	A	1	(N)	Core Skill Introduction complete,6010,6011,6012	SC	E		683
NTPS	6111	T2P	2.0		365	A	1	(N)	Core Skill phase complete, ACPM 82XX phase complete, 6010,6011,6012,6013,APRB rec	SC	E		684
SNTPS	6112	SIMS		27.0	*	S		(N)	APRB recommendation		E		603
NTPS	6113	PRF	3.0		*	A	1	(N)	6112		E		600
NTPS	6114	PRF	3.0		*	A	1	(N)	6113		E		601
NTPS	6115	PRF	3.0		*	A	1	(N)	6114		E		602
NTPS	6117	ROUTE CHECK	8.0		*	A	1	(N)	6115		E		604
NTPS	6118	TPC	2.0		365	A/S	1	(N)	Core Skill, Mission Skill, ACPM 83XX phase complete, 6010,6011,6012,6112,6113, 6114,6115,6117, APRB rec	SC,R	E		685
NTPS	6120	EP SIM		1.0	90	S/A		(N)		SC,R	E		
			24.0	28.0									
INSTRUMENT (INST)													
INST	6030	INST GND SCH			365					SC,R	E		
INST	6031	INST ORAL EXAM			365					SC,R	E		
INST	6130	STANDARD INST	2.0		365	A/S	1	(N)	6030,6031	SC,R	E		681
INST	6131	SPECIAL INST	2.0		365	A/S	1	(N)	6030,6031,6130	SC,R	E		682
			4.0	0.0									
SECTION LEADER (SL) DESIGNATION													
SL	6300	SEC LD PRACT	3.0		*	A	2	(NS)	100 TPC flight hours, 2 flights as TPC wingman, SL academics complete, 8630, 8660, APRB recommendation		E		630
SL	6301	SEC LD CERT	3.0		*	A	2	(NS)	6300	R	E		631
SL	6302	SEC LD PROF	2.0		365	A	2	(NS)	6301				632
			8.0	0.0									
DIVISION LEADER (DL) DESIGNATION													
DL	6303	DIV LD PRACT	3.0		*	A	3	(NS)	2 flights as a SL, 200 TPC flight hours, DL academics complete, 8640, 8641, 8620, APRB recommendation		E		633
DL	6304	DIV LD CERT	3.0		*	A	3	(NS)	6303	R	E		634
DL	6305	DIV LD PROF	2.0		365	A	3	(NS)	6304				635
			8.0	0.0									

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TACTICAL REFUELING AREA COMMANDER (TACRAC)													
RAC	6311	TACRAC CERT	3.0		*	A	2	(NS)	SL (6301), TACRAC academics	R	E		636
RAC	6312	TACRAC PROF	2.0		365	A	2	(NS)	6311				637
			5.0	0.0									
STRATEGIC REFUELING AREA COMMANDER (STRATRAC)													
RAC	6314	STRATRAC CERT	6.0		*	A	2	(NS)	DL (6304), TACRAC (6311), STRATRAC academics, APRB rec	R	E		638
RAC	6315	STRATRAC PROF	3.0		730	A	2	(NS)	6314				639
			9.0	0.0									
			62.0	28.0									

KC-130T PILOT												
8000 AVIATION CAREER PROGRESSION MODEL PHASE												
STAGE	TRNG CODE	EVENT DESC	ACADEMIC HOURS	REFLY INTVL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVAL	CHAINING	EVENT CONV
ACPM CORE SKILL												
ACPM	8200	MACCS AGENCIES, FUNCTIONS, AND CONTROL OF AIRCRAFT AND MISSILES	0.5	*	-	-	-	-	ALL	-	-	-
ACPM	8201	MWCS BRIEF	0.5	*	-	-	-	-	ALL	-	-	-
ACPM	8202	ACA AND AIRSPACE	0.8	*	-	-	-	-	ALL	-	-	-
ACPM	8210	AVIATION GROUND SUPPORT	0.7	*	-	-	-	-	ALL	-	-	-
ACPM	8230	ACE BATTLE STAFF	1.0	*	-	-	-	-	ALL	-	-	-
ACPM	8231	BATTLE COMMAND DISPLAY	1.0	*	-	-	-	-	ALL	-	-	-
ACPM	8240	SIX FUNCTIONS OF MARINE AVIATION	1.7	*	-	-	-	-	ALL	-	-	-
ACPM	8241	JTAR / ASR INTRODUCTION AND PRACTICAL APPLICATION	1.3	*	-	-	-	-	ALL	-	-	-
ACPM	8242	SITE COMMAND PRIMER	1.0	*	-	-	-	-	ALL	-	-	-
ACPM	8250	THEATER AIR GROUND SYSTEM (TAGS)	0.8	*	-	-	-	-	ALL	-	-	-
			9.3									
ACPM MISSION SKILL												
ACPM	8300	AIR DEFENSE	0.8	*	-	-	-	-	ALL	-	-	-
ACPM	8310	FORWARD ARMING REFUELING POINT (FARP) OPERATIONS	0.8	*	-	-	-	-	ALL	-	-	-
ACPM	8311	MARINE CORPS TACTICAL FUEL SYSTEMS	0.8	*	-	-	-	-	ALL	-	-	-
ACPM	8320	JOINT STRUCTURE AND JOINT AIR OPERATIONS	1.0	*	-	-	-	-	ALL	-	-	-
ACPM	8321	JOINT AIR TASKING CYCLE PHASE 1: STRATEGY DEVELOPMENT	0.3	*	-	-	-	8320	ALL	-	-	-
ACPM	8322	JOINT AIR TASKING CYCLE PHASE 2: TARGET DEVELOPMENT	0.3	*	-	-	-	8321	ALL	-	-	-
ACPM	8323	JOINT AIR TASKING CYCLE PHASE 3: WEAPONNEERING AND ALLOCATION	0.3	*	-	-	-	8322	ALL	-	-	-

ACPM	8324	JOINT AIR TASKING CYCLE PHASE 4: JOINT ATO PRODUCTION	0.3	*	-	-	-	8323	ALL	-	-	-
ACPM	8325	JOINT AIR TASKING CYCLE PHASE 5: FORCE EXECUTION	0.3	*	-	-	-	8324	ALL	-	-	-
ACPM	8326	JOINT AIR TASKING CYCLE PHASE 6: COMBAT ASSESSMENT	0.3	*	-	-	-	8325	ALL	-	-	-
ACPM	8340	INTEGRATING FIRES & AIRSPACE WITHIN IN MAGTF	0.5	*	-	-	-	-	ALL	-	-	-
ACPM	8350	PHASING CONTROL ASHORE	0.8	*	-	-	-	-	ALL	-	-	-
ACPM	8351	TACRON ORGANIZATIONS & FUNCTIONS	1.0	*	-	-	-	-	ALL	-	-	-
			7.5									
ACPM FLIGHT LEADERSHIP												
SECTION LEADER												
ACPM	8630	TACTICAL AIR COMMAND CENTER (TACC)	1.0	*	-	-	-	-	ALL	-	-	-
ACPM	8660	JOINT OPS INTRO	0.4	*	-	-	-	-	ALL	-	-	-
			1.4									
DIVISION LEADER												
ACPM	8640	JOINT DATA NETWORK	0.8	*	-	-	-	-	ALL	-	-	-
ACPM	8641	MAGTF THEATER AND NATIONAL ISR EMPLOYMENT	1.3	*	-	-	-	-	ALL	-	-	-
ACPM	8620	ESG / CSG INTEGRATION	1.0	*	-	-	-	-	ALL	-	-	-
			3.1									
			21.3									

215. SYLLABUS EVALUATION FORMS. MAWTS-1, the syllabus sponsor, maintains and updates training and readiness grade sheets.

CHAPTER 3

KC-130T TACTICAL SYSTEMS OPERATOR (TSO)/MISSION SPECIALIST (MOS 7372 / 7380)

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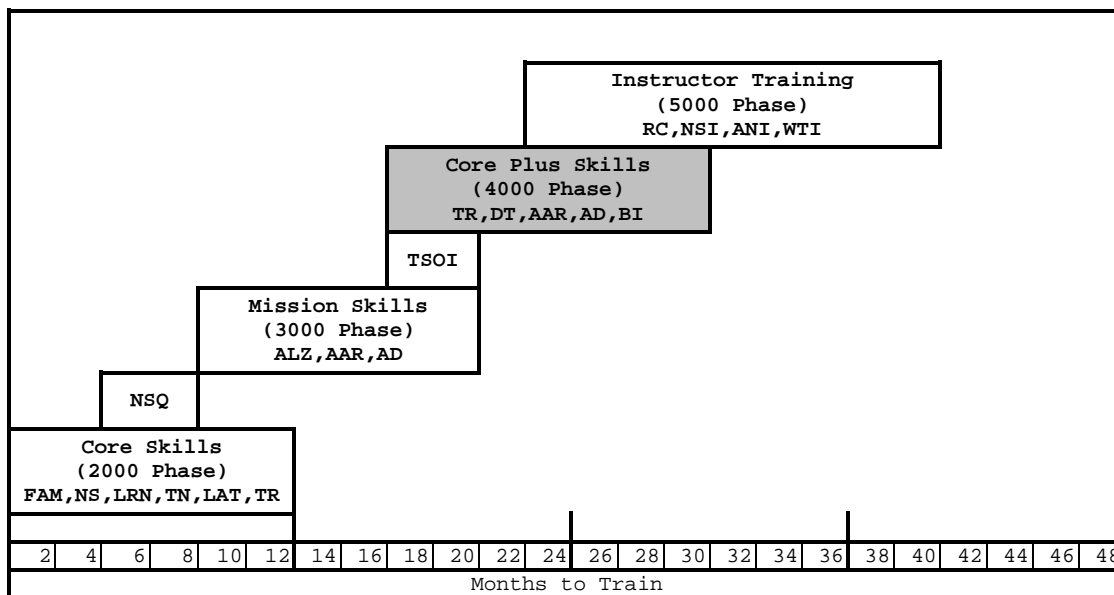
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# CHAPTER 3

## TACTICAL SYSTEMS OPERATOR (TSO)/MISSION SPECIALIST

300. TACTICAL SYSTEMS OPERATOR (TSO)/MISSION SPECIALIST 7372 / 7380 INDIVIDUAL TRAINING AND READINESS REQUIREMENTS. This T&R Syllabus is based on specific goals and performance standards designed to ensure individual proficiency in Core and Mission Skills. The goal of this chapter is to develop individual and unit warfighting capabilities.

301. TACTICAL SYSTEMS OPERATOR (TSO)/MISSION SPECIALIST TRAINING PROGRESSION MODEL. This model represents the recommended training progression for the average TSO crewmember. Units should use the model as a point of departure to generate individual training plans.



302. INDIVIDUAL CORE SKILL PROFICIENCY (CSP) REQUIREMENTS. A CSP crew consists of individuals representing each crew position who have achieved and currently maintain Individual CSP. In order to be considered proficient in a Core Skill, an individual must attain and maintain proficiency in Core Skill events as delineated in the below paragraphs.

1. Events Required to Attain Individual CSP. To initially attain CSP in a Core Skill, an individual must simultaneously have a proficient status in all 2000 phase T&R events listed for that Core Skill:

INDIVIDUAL CORE SKILL PROFICIENCY (CSP) ATTAIN TABLE				
T&R events required to Attain CSP (2000 Phase)				
NS	LRN	TN	LAT	TR
2150R	2160R	2200R	2260R	2400R
2151R		2250R	2261R	2401R
		2251R		
Gray highlight & an R suffix on the event code = Refresher POI				

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2. Events Required to Maintain Individual CSP. To maintain CSP in a Core Skill, an individual must maintain proficiency in all 2000 phase T&R events listed for that Core Skill:

INDIVIDUAL CORE SKILL PROFICIENCY (CSP) MAINTAIN TABLE				
T&R events required to Maintain CSP (2000 Phase)				
NS	LRN	TN	LAT	TR
2151R	2160R	2251R	2261R	2401R
Gray highlight & an R suffix on the event code = Refresher POI				

303. INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) REQUIREMENTS. A MSP crew consists of individuals representing each crew position who have achieved and currently maintain Individual MSP. To be considered proficient in a Mission Skill, an individual must attain and maintain proficiency in Mission Skill events as delineated in the below paragraphs.

1. Events Required to Attain Individual MSP. To initially attain MSP in a Mission Skill, an individual must simultaneously have a proficient status in all 3000 phase T&R events listed for that Mission Skill:

INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) ATTAIN TABLE		
T&R events required to Attain MSP (3000 Phase)		
ALZ	AAR	AD
3500	3600R	3700
3501R	3601	3701
	3650R	3750R
Gray highlight & an R suffix on the event code = Refresher POI		

2. Events Required to Maintain Individual MSP. To maintain MSP in a Mission Skill, an individual must maintain proficiency in all 3000 phase T&R events listed for that Mission Skill:

INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) MAINTAIN TABLE		
T&R events required to Maintain MSP (3000 Phase)		
ALZ	AAR	AD
3501R	3600R	3750R
	3650R	
Gray highlight & an R suffix on the event code = Refresher POI		

3. Events Required to Attain Individual Proficiency in Core Plus / Mission Plus Skills. Proficiency in Core Plus Skills is not required to obtain unit CSP. Training to Core Plus Skills is at the discretion of the unit commanding officer. To initially attain proficiency in a Core Plus Skill, an individual must simultaneously have a proficient status in all T&R events listed for that Core Plus Skill:

INDIVIDUAL CORE PLUS SKILL ATTAIN TABLE				
T&R events required to Attain Core Plus Skill (4000 Phase)				
CORE PLUS SKILLS				MISSION PLUS
TR	DT	AAR	AD	BI
4400R	4410R	4600	4700R	4710R
		4601R	4701R	
Gray highlight & an R suffix on the event code = Refresher POI				

4. Events Required to Maintain Individual Proficiency in Core Plus / Mission Plus Skills. To maintain proficiency in a Core Plus Skill, an individual must maintain proficiency in all T&R events listed in the table below for that Core Plus Skill:

INDIVIDUAL CORE PLUS SKILL MAINTAIN TABLE				
T&R events required to Maintain Core Plus Skill (4000 Phase)				
CORE PLUS SKILLS				MISSION PLUS
TR	DT	AAR	AD	BI
4400R	4410R	4601R	4700R	4710R
			4701R	
Gray highlight & an R suffix on the event code = Refresher POI				

304. REQUIREMENTS, QUALIFICATION AND DESIGNATION TABLES. The tables below delineate T&R events required to be completed to attain proficiency, and initial qualifications and designations. In addition to event requirements, all required stage lectures, briefs, squadron training, prerequisites, and other criteria shall be completed prior to completing final events. Qualification and designation letters signed by the commanding officer shall be placed in the individual's NATOPS jacket. Loss of proficiency in all qualification events causes the associated qualification to be lost. Regaining a qualification requires completing all R-coded syllabus events associated with that qualification.

INDIVIDUAL QUALIFICATION REQUIREMENTS	
Qualification	Event Requirements
NSQ	NS-2150, NS-2151, NITE LAB, NVD I & II.

INDIVIDUAL DESIGNATION REQUIREMENTS	
Designation	Event Requirements
ANNUAL NATOPS	NTPS-6118, IAW OPNAVINST 3710.7.
TSOI	TSOI-5100, TSOI-5101, TSOI-5102 and APRB recommendation.
ANI/NI/GNE	NI-5140 shall be instructed by the NI, GNE, or Model Manager.
RENDEZVOUS CONTROLLER	AAR-4600, AAR-4601.
NSI	NSI-5150, NSI-5151, NSI-5152, NSI-5153. IAW the MAWTS-1 Course Catalog.
WTI	WTI-5999. IAW the MAWTS-1 Course Catalog.

### 305. PROGRAMS OF INSTRUCTION (POI)

#### 1. Basic (B) POI.

WEEKS	COURSE	PERFORMING ACTIVITY
0-48	Core Skill Training	Tactical Squadron
32-76	Mission Skill Training	Tactical Squadron
64-120	Core Plus Training	Tactical Squadron

2. Refresher (R) POI. A TSO returning from a DIFDEN tour exceeding 12 months should complete the Refresher syllabus.

WEEKS	COURSE	PERFORMING ACTIVITY
1	Squadron Ground Training	Tactical Squadron
2-48	Core Skill Training	Tactical Squadron

306. ACADEMIC TRAINING

1. Academic training shall be conducted for each phase/stage of the syllabus. Where indicated, standardized academic training materials exist and may be obtained from the sponsoring activity.

2. External academic courses of instruction available to complete the syllabus are listed below:

COURSE	ACTIVITY
Naval Aircrew Candidate Course	NAS Pensacola, FL
Survival, Evasion, Resistance, and Escape (SERE) Course	NAS Brunswick ME NAS North Island CA
NITE lab	Tactical Squadron
Weapons and Tactics Instructor (WTI)	MAWTS-1
Mobility Electronic Combat Officer Course (MECOC)	St Joseph, MO
Advanced Airlift Tactics Training Course (AATTC)	AATTC, St. Joseph MO

307. CORE SKILL INTRODUCTION PHASE (1000). Not applicable.

308. CORE SKILL PHASE (2000)

1. General. The focus of Core Skill Phase is to train the TSO in duties essential to wartime employment. This includes: Familiarization (FAM), Night Systems (NS) operations, Long Range Navigation (LRN), Tactical Navigation (TN), Low Altitude Tactics (LAT), and IR Threat Reaction (TR).

a. The TSO under instruction shall receive the appropriate MAWTS-1 Course Catalog Academic Support Package (ASP) lectures prior to the appropriate stage of training.

b. The trainee is required to occupy the TSO position in the flight station on all syllabus training flights.

c. All instructors must be proficient in the event to instruct.

d. CRM shall be briefed for all flights and/or events.

2. Familiarization (FAM)

a. Purpose. This stage of training will familiarize the TSO with local squadron procedures.

b. General. Emphasize planning, briefing, pre-flight procedures, and CRM.

c. Crew Requirements. Shall be instructed by a TSOI.

d. Academic/Ground Training. Prior to FAM-2100, the TSO should complete a familiarization training evolution to include cockpit management, aircraft preflight and post flight, emergency evacuation, and use and donning of all emergency equipment.

FAM-2100 4.0 365 R 1 KC-130 A (N)

Goal. Introduce the TSO to local area and squadron operating procedures.

Requirement. Execute a local flight, concentrating on local course rules procedures per station orders, squadron and TSO SOPs.

Performance Standard. Per local and squadron directives, NATOPS, FLIP, and ICAO procedures.

Prerequisite. The TSO will review the squadron and TSO SOPs prior to this flight and shall successfully complete a local course rules examination.

### 3. Night Systems (NS)

a. Purpose. To train the TSO in NS. The TSO will be capable of performing crew duties using NVDs during High Light Level (HLL) and Low Light Level (LLL) conditions. Upon completion on this stage of training the TSO should be qualified as NSQ by the squadron commanding officer.

b. General. Emphasize planning, briefing, pre-flight procedures, and CRM.

c. Crew Requirements. Shall be instructed by a NSI.

d. Academic/Ground Training. Must complete NITE Lab and complete NVD I and NVD II MAWTS-1 ASPs.

NS-2150 3.0 365 R 1 KC-130 A NS

Goal. Introduce the TSO to the use and wear of NVD's under High Light Level (HLL) conditions with emphasis on NVD pre-flight, in-flight donning, and CRM.

Requirement. The TSO will plan and fly a non-tactical NVD sortie under HLL conditions. The TSO shall be introduced to: NVD emergency procedures, proper NVD scanning techniques, terrain recognition, atmospheric impact on NVD performance, and visual acuities associated with HLL conditions.

Performance Standard. Demonstrate the ability to function as a TSO per NATOPS utilizing NVD's under HLL.

Prerequisite. FAM-2100. Must complete NITE Lab and complete NVD I and NVD II MAWTS-1 ASPs.

NS-2151 3.0 365 R 1 KC-130 A NS

Goal. Introduce the TSO to the use and wear of NVD's under Low Light Level (LLL) conditions with emphasis on NVD pre-flight, in-flight donning, and CRM. Upon successful completion of this event the TSO should be qualified as NSQ by the squadron commanding officer.

Requirement. The TSO will plan and fly a non-tactical NVD sortie under LLL conditions. The TSO shall refine proper NVD scanning techniques, be introduced to terrain recognition,

atmospheric impact on NVD performance, and visual acuities associated with LLL conditions.

Performance Standard. Demonstrate the ability to function as a TSO per NATOPS utilizing NVD's under LLL conditions.

Prerequisite. NS-2150.

#### 4. Long Range Navigation (LRN)

a. Purpose. Refine the TSO's proficiency and confidence required for safe extended ICAO/Non-RADAR flight. Specifically, at the end of this stage the TSO will be able to:

(1) Integrate all available navigation aids.

(2) Use the aircraft's RADAR for fixing and/or weather avoidance as necessary.

(3) Correctly determine the required planned ramp, ensuring fuel consumption and corresponding progress toward destination are within safe limits.

b. General. This flight shall be accomplished in an ICAO environment on a multi-national itinerary with a minimum of one 5-hour route.

c. Crew Requirements. Shall be instructed by a TSOI.

d. Academic/Ground Training. The TSO will review procedures for ICAO flight to include the FLIP and FCG.

LRN-2160            5.0       365            R    1 KC-130    A    (N)

Goal. Integrate all available navigation aids emphasizing INS and GPS operations in a global environment.

Requirement. The TSO will demonstrate the ability to perform mission planning in an ICAO environment and to determine the aircraft's position within FLIP tolerances.

Performance Standard. Per NATOPS, FLIP, ICAO, and FCG procedures.

Prerequisite. FAM-2100.

#### 5. Tactical Navigation (TN)

a. Purpose. Develop the TSO's knowledge and proficiency in tactical navigation.

b. General. Emphasize computer-based mission planning systems, RADAR terrain mapping, terrain masking, threat avoidance, time, and course control. Route selection should offer maximum variations in en route conditions.

c. Crew Requirements. TN-2200 shall be instructed by a TSOI. For TN-2250 and TN-2251 a TSO NSI is required only if the initial sortie is conducted using NVD's and the TSO under instruction is not NSQ. A TSOI who is NSQ may instruct an NSQ TSO on initial TN-2250 and TN-2251 events.

d. Academic/Ground Training. The TSO will review the appropriate KC-130 ANTTTP chapters and MAWTS-1 ASP's on low-level operations.

TN-2200            2.0       365           R    1    KC-130   A    D

Goal. Refine skills required to plan, brief, and execute a tactical, low-level sortie.

Requirement.

- (1) Perform TSO duties on a tactical, low-level sortie.
- (2) Review route planning and chart preparation procedures emphasizing checkpoint selection, use of intermediate checkpoints, limiting features, prominent terrain features, and airspace control measures.
- (3) Conduct a route brief.
- (4) Navigate along a low-level route consisting of a minimum of six (6) pre-selected checkpoints integrating all available navigation aids.

Performance Standard. Maintain aircraft position within route width and arrive at a pre-selected checkpoint within +/- 30 seconds of a pre-determined TOT.

Prerequisite. FAM-2100.

TN-2250            2.0       365           R    1    KC-130   A    NS

Goal. Introduce skills required to plan, brief, and execute a HLL night systems, tactical, low-level sortie.

Requirement.

- (1) Perform TSO duties under HLL conditions on a tactical, low-level sortie.
- (2) Introduce the tactical advantages and administrative restrictions associated with HLL conditions.
- (3) Review route planning and chart preparation procedures emphasizing checkpoint selection, intermediate checkpoints, limiting features, prominent terrain features, and airspace control measures during HLL conditions.
- (4) Conduct a route brief.
- (5) Navigate along a low-level route consisting of a minimum of six (6) pre-selected checkpoints integrating all available navigation aids.
- (6) Discuss CRM considerations during tactical operations.

Performance Standard. Maintain aircraft position within route width and arrive at a pre-selected checkpoint within +/- 30 seconds of a pre-determined TOT.



Prerequisite. TN-2200 and NS-2150.

TN-2251	2.0	180	R	1	KC-130	A	NS
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Goal. Introduce skills required to plan, brief, and execute a tactical, low-level sortie under LLL conditions.

Requirement.

(1) Perform TSO duties on a tactical, low-level sortie under LLL conditions.

(2) Introduce the tactical advantages and administrative restrictions associated with LLL conditions.

(3) Review night route planning and chart preparation procedures emphasizing checkpoint selection, altitude planning, use of intermediate checkpoints, limiting features, prominent terrain features, and airspace control measures during night operations.

(4) Conduct a route brief.

(5) Navigate along a low-level route consisting of a minimum of six (6) pre-selected checkpoints integrating all available navigation aids.

(6) Discuss CRM considerations associated with tactical NS operations.

Performance Standard. Maintain aircraft position within route width and arrive at a pre-selected checkpoint within +/- 30 seconds of a pre-determined TOT.

Prerequisite. TN-2250.

#### 6. Low Altitude Tactics (LAT)

a. Purpose. Develop the TSO's knowledge and proficiency in Low Altitude Tactics.

b. General. General LAT rules of conduct (ROC) are contained in NAVMC 3500.14 and KC-130 specific LAT guidance is contained in the KC-130 ANTPP. Emphasize computer-based mission planning systems, RADAR terrain mapping, terrain masking, threat avoidance, time, and course control. Route selection should offer maximum variations in en route conditions.

c. Crew Requirements. Shall be instructed by a TSOI.

d. Academic/Ground Training. The TSO will review the appropriate KC-130 ANTPP chapters and MAWTS-1 ASP's on low-level and LAT operations.

LAT-2260	1.0	*	R	1	KC-130	A	D
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Goal. Introduce skills required to plan, brief, and execute a tactical, low-level sortie in a LAT environment.

Requirement

- (1) Perform TSO duties on a tactical, low-level sortie in the LAT environment.
- (2) Review route planning and chart preparation procedures emphasizing threat assessment and avoidance, terrain masking, checkpoint selection, and airspace control measures.
- (3) Conduct a route brief.
- (4) Navigate along an approved LAT route consisting of a minimum of six (6) pre-selected checkpoints integrating all available navigation aids and maximizing use of terrain to degrade detection and enhance survivability.
- (5) Discuss CRM considerations during operations at or near crew comfort level.

Performance Standard. Maintain awareness of aircraft position within route width/airspace during LAT maneuvering.

Prerequisite. TN-2200.

LAT-2261	1.0	365	R	1	KC-130	A	D
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Goal. Demonstrate skills required to plan, brief, and execute a tactical, low-level sortie in a LAT environment.

Requirement

- (1) Perform TSO duties on a tactical, low-level sortie in the LAT environment.
- (2) Demonstrate an understanding of route planning and chart preparation procedures emphasizing threat assessment and avoidance, terrain masking, checkpoint selection, and airspace control measures.
- (3) Conduct a route brief.
- (4) Navigate along an approved LAT route consisting of a minimum of six (6) pre-selected checkpoints integrating all available navigation aids and maximizing use of terrain to degrade detection and enhance survivability.
- (5) Discuss CRM considerations during operations at or near crew comfort level.

Performance Standard. Maintain aircraft position within route width and arrive at a pre-selected checkpoint within +/- 30 seconds of a pre-determined TOT during LAT maneuvering.

Prerequisite. LAT-2260.

7. Threat Reaction (TR)

a. Purpose. To train the TSO in the skills required to operate the KC-130 Aircraft Survivability Equipment (ASE) suite in a tactical scenario in an IR MANPAD and small arms surface to air threat environment.

b. General

(1) Aircraft should have a fully operational ASE suite.

(2) Appropriate expendables shall be loaded prior to initial events. In order to maximize training opportunities, TSO's who are proficient in TR-2401 may maintain proficiency by utilizing the training mode of the ALE-47 provided training is conducted in conjunction with TN-2210, appropriate threats are briefed, ASE suite is operated IAW ANTP, and appropriate maneuvers are conducted in conjunction with simulated release of expendables.

(3) Initial events shall be flown in the day.

(4) The use of Smokey SAM pyrotechnics and Missile Warning System stimulators is recommended. Aircrew training officers may have to be creative in gaining the best possible training due to the limited availability of expendables and ranges.

c. Crew Requirements. Shall be instructed by a WTI.

d. Academic/Ground Training. The TSO shall receive instruction on the IR/MANPAD threat, counter-tactics, expendable characteristics and effectiveness, capabilities and limitations of the AAR-47, ALE-47, and ALQ-157.

TR-2400            2.0    \*            R    1    KC-130    A/S    D

Goal. Introduce the planning considerations and in-flight operation of the ASE systems with emphasis on setup of the system for automatic and continuous defense against an IR/MANPAD and small arms surface to air threat.

Requirement.

(1) Perform TSO duties associated with the operation of the ASE suite in order to counter an IR/MANPAD and small arms surface to air threat.

(2) Plan and configure the ASE suite to counter an IR/MANPAD and small arms surface to air threat.

(3) Introduce the basic concepts of various chaff and flare load-out configurations, and capabilities and limitations of all available expendables. Introduce operation of the ALE-47 CMDS.

(4) Discuss the capabilities and limitations of the ALQ-157 with emphasis on IR jammer codes and power up/power down procedures.

(5) Discuss the AAR-47s capabilities and limitations.

(6) Discuss counter-tactics to include appropriate expendables and maneuvers for a specific threat.

(7) Discuss CRM considerations for operations in a threat environment.

(8) Deploy expendables in response to simulated threat systems.

(9) Multiple passes shall be made against simulated threat systems and appropriate maneuvers and countermeasures initiated.

Performance Standard. Must correctly configure and operate the ASE suite, use appropriate terminology, and initiate appropriate defensive responses to threat indications.

Prerequisite. FAM-2100 and TN-2200.

Ordinance. 120 flare expendables (required for initial event).

External Syllabus Support. SUAS permitting deployment of decoy flares. An EW range with Smokey SAM teams, AAR-47 stimulators and debrief capabilities greatly enhance aircrew training and should be used to the maximum extent possible.

TR-2401	2.0	365	R	1 KC-130	A/S	(N)
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Goal. Refine the planning considerations and in-flight operation of the ASE systems with emphasis on setup of the system for automatic and continuous defense against an IR/MANPAD and small arms surface to air threat.

Requirement.

(1) Perform TSO duties associated with the operation of the ASE suite in order to counter an IR/MANPAD and small arms surface to air threat.

(2) Plan and configure the ASE suite to counter an IR/MANPAD and small arms surface to air threat.

(3) Demonstrate a basic understanding of various flare load-out configurations and decoy flare capabilities and limitations. Demonstrate the ability to operate the ALE-47 CMDS.

(4) Demonstrate an understanding of the ALQ-157 IR jammer codes and power up/power down procedures.

(5) Demonstrate an understanding of the AAR-47 capabilities and limitations.

(6) Discuss IR/MANPAD and small arms counter-tactics to include appropriate expendables and maneuvers for a specific threat.

(7) Discuss CRM considerations for operations in a threat environment.

(8) Deploy expendables using both the remote dispensing switches and master switch.

(9) Multiple engagements shall be made against a simulated IR/MANPAD threat system and appropriate maneuvers and countermeasures initiated.

Performance Standard. Must correctly configure and operate the ASE suite, use appropriate terminology and initiate appropriate defensive responses to threat indications.

Prerequisite. TR-2400.

Ordinance. 120 flare expendables (required for initial event).

External Syllabus Support. SUAS permitting deployment of decoy flares. An EW range with Smokey SAM teams, AAR-47 stimulators and debrief capabilities greatly enhance aircrew training and should be used to the maximum extent possible.

309. MISSION SKILL PHASE (3000)

1. General. The focus of the Mission Skill Phase is to train the TSO in the skills required to meet the Marine Corps Tasks (MCT). These missions include: Assault Landing Zone (ALZ) operations, Air-to-Air Refueling (AAR), and Air Delivery (AD).

a. The TSO under instruction shall receive the appropriate MAWTS-1 ASP lectures prior to the appropriate stage of training.

b. The trainee is required to occupy the TSO position in the flight station on all syllabus training flights.

c. All instructors must be proficient in the events they instruct.

d. To fly an event aided without an instructor, the TSO must be NSQ and proficient in the given event.

e. CRM shall be briefed for all flights and/or events.

2. Assault Landing Zone (ALZ)

a. Purpose. To refine the skills necessary to plan and navigate to airfields emphasizing ingress/egress and approach profiles.

b. General. ALZ-3501 shall be accomplished in day or night VMC conditions.

c. Crew Requirements. For ALZ-3500 and ALZ-3501, a TSO NSI is required only if the initial sortie is conducted using NVD's and the TSO under instruction is not NSQ. A TSOI who is NSQ may instruct an NSQ TSO on initial ALZ-3500 and ALZ-3501 events flown using NVD's. Any TSOI may instruct these events during the day or unaided.

d. Academic/Ground Training. The TSO shall review the KC-130 ANTPP chapters and MAWTS-1 ASP's concerning ALZ operations.

ALZ-3500            1.5        365                    1 KC-130    A    (N)

Goal. To refine the skills necessary to plan and navigate to airfields emphasizing ingress/egress and approach profiles in a threat environment and introduce the planning considerations and the construction of a self-contained approach plate.

Requirement

- (1) Demonstrate an understanding of the various ingress and approach options to an airfield in a threat environment including SCA, IR cooled descent, random high, random low/shallow, straight-in, teardrop, and abeam approaches.
- (2) Demonstrate an understanding of SCA planning considerations associated with the various threat environments.
- (3) Discuss the advantages and disadvantages of various egress profiles.
- (4) Plan and execute multiple ingresses to an airfield to include: random high, random low/shallow, straight-in, teardrop, and abeam approaches; compute slowdown and descent points for the various approaches.

Performance Standard. For initial training, execute multiple tactical approaches.

Prerequisite. FAM-2100.

External Syllabus Support. MMT, STS, EAF and/or CFR as required.

ALZ-3501	1.5	365	R	1	KC-130	A	(N)
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Goal. Refine the planning considerations and execution of a self-contained approach.

Requirement.

- (1) Demonstrate an understanding of SCA planning criteria, emphasizing ALZ requirements, terrain avoidance considerations, construction of the SCA plate, obstacle clearance criteria, slow down calculation, missed approach planning, the threat, and day/night/NS considerations.
- (2) Construct a SCA approach plate.
- (3) Conduct a SCA to an ALZ integrating all available navigation aids. The TSO will provide advisories to the pilots throughout the approach phase from initial descent to touchdown.
- (4) The TSO will not have access to visual navigation aids during training.

Prerequisite. ALZ-3500.

Performance Standard. For initial training, successfully execute multiple self contained approaches.

External Syllabus Support. MMT, STS, EAF and/or CFR as required.

### 3. Air-to-Air Refueling (AAR)

a. Purpose. To develop the TSO's knowledge, understanding, and proficiency required for fixed wing, tilt rotor, and helicopter AAR operations in the day or night environment.

b. General. Aircraft should have an operating APX, UHF/DF, A/A TACAN, and weather RADAR.

c. Crew Requirements. For AAR-3600 and AAR-3650, a TSO NSI is required only if the initial sortie is conducted using NVD's and the TSO under instruction is not NSQ. A TSOI who is NSQ may instruct an NSQ TSO on initial AAR-3600 and AAR-3650 events flown using NVD's. Any TSOI may instruct these events during the day or unaided.

d. Academic/Ground Training. The TSO will review air-to-air refueling procedures in the NATOPS, ANTTP and the ATP-56(B).

AAR-3600	2.0	365	R	1 KC-130	A	(N)
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Goal. Refine skills required to plan, brief, and execute a fixed wing/tilt rotor air-to-air refueling mission.

Requirement. Perform TSO duties on a fixed wing/tilt rotor air-to-air-refueling mission per NATOPS.

Performance Standard. Arrive at an ARCP at ARCT (+/- 1 min) and maintain aircraft position within assigned refueling airspace.

Prerequisite. FAM-2100.

External Syllabus Support. Fixed-wing or tilt rotor receiver aircraft.

AAR-3601	2.0	365		1 KC-130	A	D
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Goal. Refine skills required to plan, brief, and execute a day helicopter air-to-air refueling mission.

Requirement. Perform TSO duties on a day helicopter air-to-air refueling mission.

Performance Standard. Locate the receiver using RADAR, APX, UHF/DF, and/or A/A TACAN. Conduct multiple rendezvous.

Prerequisite. FAM-2100.

External Syllabus Support. Helicopter receiver aircraft.

AAR-3650	2.0	365	R	1 KC-130	A	NS
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Goal. Introduce skills required to plan, brief, and execute a NVD helicopter air-to-air refueling mission.

Requirement. Perform TSO duties on a NVD helicopter air-to-air refueling mission.

Performance Standard. Locate the receiver using RADAR, APX, UHF/DF, and/or A/A TACAN. Conduct multiple rendezvous.

Prerequisite. AAR-3601.

External Syllabus Support. Helicopter receiver aircraft.

4. Air Delivery (AD)

a. Purpose. Instruct the TSO in air delivery techniques. At the end of this stage the TSO will be able to compute an air delivery release point, understand all checklists and time warnings, and call the airdrop.

b. General

(1) Initial events shall be flown in the day except for AD-3750.

(2) When conducting AD-3750, the prerequisite code of AD-3700 is required if cargo is to be dropped and AD-3701 is required if personnel (static-line) are to be dropped.

(3) Once complete with the AD-3750, the TSO may conduct either type of drop on NVD's, provided they are proficient in that type of drop.

c. Crew Requirements. Any TSOI may instruct these events during the day. A TSO NSI is required to instruct initial AD-3750.

d. Academic/Ground Training. The TSO shall review the ANTPP chapter pertaining to air delivery and receive instruction on Computed Air Release Point (CARP) computations per Air Force Instruction (AFI) 11-231.

AD-3700	1.5	365	1 KC-130	A	(NS)
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Goal. Refine air delivery techniques and navigation procedures to release points in connection with cargo air delivery.

Requirement.

(1) Perform TSO duties on a cargo air delivery sortie.

(2) Review route planning and chart preparation procedures emphasizing release point computation, air delivery limitations, drop zone criteria, air delivery checklists, emergency procedures, slow-down procedures, and ingress/egress options.

(3) Plan a route to a drop zone and compute a CDS and an HE CARP.

(4) Conduct an objective area brief to include planned release point, drop zone hazards, IP inbound, slow-down, and egress.

(5) Navigate to a drop zone, relay all time warnings, call a CDS or HE air delivery, and navigate an egress route.

Performance Standard. Must compute and execute a CDS or HE air delivery that lands within drop zone.

Prerequisite. FAM-2100.

External Syllabus Support. Air Delivery Platoon or equivalent, material handling equipment and support personnel,



a DZ team to include a corpsman, and a drop zone survey per MCO 3500.20. A PPN-19/SMP-2000 is recommended but not required.

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AD-3701	1.5	365	1 KC-130	A	(NS)
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Goal. Introduce air delivery techniques and navigation procedures to release points in connection with low-altitude static-line personnel air delivery.

Requirement.

(1) Perform TSO duties on a static-line personnel air delivery sortie.

(2) Review route planning and chart preparation procedures. Emphasize release point computation, air delivery limitations, drop zone criteria, air delivery checklists, emergency procedures, slow-down procedures, and ingress/egress options.

(3) Plan a route to a drop zone and compute a CARP.

(4) Conduct an objective area brief to include planned release point, drop zone hazards, IP inbound, slow-down, and egress.

(5) Navigate to a drop zone, relay all time warnings, call a static-line personnel air delivery, and navigate an egress route.

Performance Standard. Jumpers must land within drop zone.

Prerequisite. FAM-2100.

External Syllabus Support. Air delivery qualified personnel, a DZ team to include a corpsman, and a drop zone survey per MCO 3500.20. A PPN-19/SMP-2000 is recommended but not required.

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AD-3750	1.5	365	R	1 KC-130	A	NS
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Goal. Refine air delivery techniques and navigation procedures to release points in connection with static-line personnel or cargo air delivery utilizing NVD's.

Requirement

(1) Perform TSO duties on a static-line personnel or cargo air delivery sortie utilizing NVD's.

(2) Review route planning and chart preparation procedures emphasizing NS considerations to release point computation, air delivery limitations, drop zone criteria, air delivery checklists and emergency procedures, slow-down procedures, and ingress/egress options.

(3) Plan a route to a drop zone and compute a CARP.

(4) Conduct an objective area brief to include planned release point, drop zone hazards and markings, IP inbound, slow-down, and egress.

(5) Navigate to a drop zone, relay all time warnings, call an air delivery, and navigate an egress route utilizing NVD's.

Performance Standard. Must compute and execute an air delivery that lands within drop zone.

Prerequisite. AD-3700 (if cargo), AD-3701 (if personnel).

External Syllabus Support. Air Delivery Platoon or equivalent, material handling equipment and support personnel as required, a DZ team to include a corpsman, and a drop zone survey per MCO 3500.20. A PPN-19/SMP-2000 is recommended but not required.

### 310. CORE PLUS SKILL PHASE (4000)

1. General. Upon completion of this phase of training, the TSO will be qualified to plan and execute RADAR Threat Reaction (TR), Air-to-Air Defensive Tactics (DT), long-range Air-to-Air Refueling (AAR), advanced AD (HALO/HAHO and JPADS GPS guided cargo) and Battlefield Illumination (BI).

a. The TSO under instruction shall receive the MAWTS-1 course catalog ASP lecture prior to the appropriate stage of training.

b. The trainee is required to occupy the TSO position in the flight station on all syllabus training flights.

c. All instructors must be proficient in the event to instruct.

d. To fly an event aided without an instructor, the TSO must be NSQ and proficient in the given event.

e. CRM shall be briefed for all flights and/or events.

### 2. Threat Reaction (TR)

a. Purpose. To train the TSO in the skills required to operate the KC-130 Aircraft Survivability Equipment (ASE) suite in a tactical scenario in a RADAR surface to air threat environment.

#### b. General

(1) Aircraft must have an operational ASE suite that supports radio frequency (RF) threat reaction.

(2) Appropriate chaff shall be loaded prior to flight.

(3) Initial events shall be flown in the day.

(4) Appropriate ground threat emitters shall be available.

c. Crew Requirements. Shall be instructed by a WTI.

d. Academic/Ground Training. Review the NFM, KC-130 ANTTP, Classified ANTTP, AFTTP 3-1 Threat Reference Guide. A WTI should administer the KC-130 ASE classes from the MAWTS-1 KC-130 Specific Academic Support Package.

TR-4400            2.0    365            R   1 KC-130   A/S   (N)

Goal. Refine the planning considerations and in-flight operation of the ASE systems with emphasis on configuration of the system for operations in a RADAR threat environment.

Requirement.

(1) Perform TSO duties associated with the operation of the ASE suite in order to counter a RADAR threat.

(2) Plan and configure the ASE suite to counter a RADAR threat.

(3) Refine the understanding of the basic concepts of various chaff and flare load-out configurations, capabilities and limitations of decoy chaff and flare. Refine programming and operation of the ALE-47 CMDS.

(4) Introduce APR-39 operation emphasizing OFP, EID, and threat symbology.

(5) Discuss the AAR-47 capabilities and limitations as it applies to the RADAR threat.

(6) Discuss RADAR threat counter-tactics to include appropriate expendables and maneuvers for a specific threat.

(7) Discuss CRM considerations for operations in a threat environment.

(8) Deploy expendables in response to a RADAR threat indication.

(9) Conduct multiple passes against simulated RADAR threat systems and initiate appropriate maneuvers and countermeasures.

Performance Standard. Must correctly configure and operate the ASE suite, use appropriate terminology, and initiate correct defensive responses to threat indications.

Prerequisite. TR-2400 and TN-2200.

Ordinance. 160 chaff, 140 flares.

External Syllabus Support. An operable EW range allowing chaff dispensing. An EW range with debrief facilities greatly enhance aircrew training and should be used to the maximum extent possible.

### 3. Defensive Tactics (DT)

a. Purpose. To attain and maintain the Core Plus Skill of employing Defensive Tactics against an air threat by combining maneuver and use of the ASE suite.

b. General. The DT requirements consist of DT-4410. The following is recommended but not required:

- (1) Emphasize DT maneuvering and CRM considerations during DT.
- (2) The aircraft should have an operable ASE suite.

c. Crew Requirements. A Pilot DTI or TSOI may instruct this event.

d. Academic/Ground Training. Review the KC-130 ANTTP, Classified ANTTP, and AFTTP 3-1 Threat Reference Guide concerning air-to-air threats. Review the KC-130 ASE, DT, Stress & Performance Limitations and Threat Counter-tactics classes from the MAWTS-1 KC-130 Specific Academic Support Package.

DT-4410            1.0    \*            R   1 KC-130    A    D

Goal. Familiarize the TSO with the skills and crew coordination required while executing DT against aggressor aircraft.

Requirement

- (1) Demonstrate an understanding of KC-130 defensive maneuvers.
- (2) Demonstrate an understanding of air-to-air threat.
- (3) During DT, demonstrate the proper maneuver calls and crew coordination.
- (4) Discuss the use of the ASE suite to counter an air-to-air threat.

Performance Standard. Demonstrate proper crew coordination during DT.

Prerequisite. LAT-2261.

External Syllabus Support. Aggressor aircraft and approved airspace. SUAS authorized for expendables.

4. Air-to-Air Refueling (AAR)

a. Purpose

(1) To develop the necessary skills to perform the tasks required of the lead TSO and rendezvous controller on a long-range air-to-air refueling mission.

(2) Upon successful completion of this stage of training the TSO should be designated as a Rendezvous Controller by the squadron commanding officer.

b. General

(1) Flights shall be conducted in conjunction with a movement of receiver aircraft in either a ferry, deep air strike profile (fixed wing), or long-range insert profile (rotary wing/tilt rotor) requiring a refueling area commander.

(2) The TSO shall have demonstrated an ability to plan and execute long-range air-to-air refueling missions including ALTRV or other airspace coordination measures.

c. Crew Requirements. Shall be instructed by a Rendezvous Controller.

d. Academic/Ground Training. The TSO should have completed the Central Altitude Reservation Indoctrination CBI and shall receive instruction on Rendezvous Control Procedures prior to this stage.

AAR-4600            3.0    \*                            2 KC-130   A   (N)

Goal. To refine the skills required to assist in planning and leading a long-range, air-to-air refueling mission.

Requirement

(1) Assist the rendezvous controller in planning and coordinating a long-range, air-to-air refueling mission.

(2) Introduce the planning and coordination associated with an ALTRV.

(3) Use appropriate navigation aids to arrive at an ARCP and maintain course on a refueling track.

Performance Standard. Direct aircraft to arrive at the ARCP and assist the rendezvous controller in conducting a successful rendezvous with receiver aircraft.

Prerequisite. AAR-3600, AAR-3650, FAM-2100, (2150 HLL), (2151 LLL).

External Syllabus Support. Fixed wing or helicopter receivers required.

AAR-4601            3.0    1095            E    R    2 KC-130   A   (N)

Goal. To demonstrate the skills required to plan and execute a long-range, air-to-air refueling mission. Upon successful completion of AAR-4601, the TSO should be designated as a Rendezvous Controller by the squadron commanding officer.

Requirement

(1) Plan and conduct a long-range, air-to-air refueling mission to include receiver fuel requirements, tanker requirements, abort criteria, track location and administrative requirements.

(2) Demonstrate a thorough understanding of ALTRV procedures to include message requirements, coordination, and filing procedures.

(3) Conduct the planning and coordination of an ALTRV or other airspace required to facilitate the long-range movement of receiver aircraft.

Performance Standard. Conduct a successful long-range, air-to-air refueling mission.

Prerequisite. AAR-4600.

External Syllabus Support. Fixed wing or helicopter receivers required.

5. Air Delivery (AD)

a. Purpose. Demonstrate a thorough understanding of advanced air delivery techniques.

b. Crew Requirements. For AD-4700 and AD-4701, a TSO NSI is required only if the initial sortie is conducted using NVD's and the TSO under instruction is not NSQ. A TSOI who is NSQ may instruct a NSQ TSO on initial AD-4700 and AD-4701 events flown using NVD's. Any TSOI may instruct these events during the day or unaided.

c. Academic/Ground Training. The TSO will review the appropriate KC-130 ANTTTP chapters for air delivery and battlefield illumination.

AD-4700      1.0    365      R   1 KC-130   A   (N)

Goal. Conduct air delivery of personnel/cargo utilizing high altitude release techniques with emphasis on HARP computations and navigation to release points.

Requirement

(1) Perform TSO duties on a high altitude air delivery sortie.

(2) Review route planning and chart preparation procedures emphasizing high altitude release point computation, air delivery limitations, drop zone criteria, air delivery checklists, emergency procedures, slow-down procedures, and ingress/egress options.

(3) Plan a route to a drop zone and compute a high altitude air delivery of personnel or cargo.

(4) Conduct an objective area brief to include a planned release point, drop zone hazards, IP inbound, slow-down, and egress.

(5) Navigate to a release point, relay all time warnings, call a high altitude air delivery of personnel or cargo, and navigate an egress route.

(6) Discuss physiology considerations appropriate to high altitude air delivery operations.

Performance Standard. Compute and execute a high altitude air delivery that lands within drop zone.

Prerequisite. AD-3701.

External Syllabus Support. High altitude certified personnel or cargo, a DZ team to include a corpsman, an aviation physiologist (if required), and a drop zone survey per MCO 3500.20. A PPN-19/SMP-2000 is recommended but not required.

AD-4701 1.0 \* R 1 KC-130 A (N)

Goal. Introduce air delivery techniques and theory in connection with a JPADS GPS guided cargo air delivery.

Requirement

- (1) Perform TSO duties on a JPADS GPS guided cargo air delivery sortie.
- (2) Review route planning and computer based programming procedures to determine release point computation, air delivery limitations, drop zone criteria, air delivery checklists and emergency procedures, slow-down procedures, and ingress/egress options.
- (3) Plan a route to the optimum release point based upon computer software used to program the GPS guided hardware on the cargo.
- (4) Conduct an objective area brief to include a planned release point, drop zone hazards, IP inbound, slow-down, and egress.
- (5) Navigate to a release point, relay all time warnings, call an air delivery, and navigate an egress route.
- (6) Instruction should be conducted by a WTI.

Performance Standard. Must compute and execute an air delivery that is released within safety criteria.

Prerequisite. AD-3700.

External Syllabus Support. Air Delivery Platoon or equivalent, material handling equipment and support personnel as required, a DZ team to include a corpsman, and a drop zone survey per MCO 3500.20.

6. Battlefield Illumination (BI)

a. Purpose. To attain and maintain the Mission Plus Skill of Battlefield Illumination (BI). Upon completion of this phase, the TSO will be capable of planning and executing BI.

b. Crew Requirements. Shall be instructed by a TSOI.

c. Academic/Ground Training. Utilize academic courseware as outlined in the MAWTS-1 course catalog and review MAWTS-1 ASPs, NFM, and KC-130 ANTP.

BI-4710 1.0 730 R 1 KC-130 A N

Goal. Instruct the TSO in the skills necessary to perform battlefield illumination.

Requirement.

- (1) Perform TSO duties on a battlefield illumination sortie.

(2) Review route planning and chart preparation procedures emphasizing release point computation, APF delivery characteristics, orbit and delivery patterns, battlefield illumination checklists, emergency procedures, slow-down procedures, and ingress/egress options.

(3) Direct the aircraft to a target area and compute an APF CARP.

(4) Conduct an objective area brief to include planned release point, illumination patterns, slow-down, and egress.

(5) Navigate to a release point, relay all time warnings, call a release of APFs, and navigate an egress route.

Performance Standard. For initial sortie conduct at least 1 area illumination pattern and 1 point target illumination pattern utilizing a standoff orbit, providing the desired illumination effect on the target.

Prerequisite. FAM-2100.

Ordinance. 15 LUU-2A/B, B/B or LUU-19 flares as required.

External Syllabus Support. SUAS authorized for aircraft parachute flares and illumination.

### 311. INSTRUCTOR TRAINING PHASE (5000)

1. General. The TSO IUT shall receive the MAWTS-1 ASP Courseware on Student Briefing and Critique, and Student/Instructor Roles prior to beginning this stage of training.

#### 2. TSO Instructor (TSOI)

a. Purpose. To standardize TSOI procedures. Upon successful completion of all IUT events in this stage, the TSO should be designated as a TSO Instructor by the squadron commanding officer.

##### b. General

(1) Emphasize standardization and the ability to instruct TSO procedures.

(2) Ability to instruct all phases of flight training shall be evaluated in which the TSO has previously demonstrated proficiency.

c. Crew Requirements. A TSO Assistant NATOPS Instructor (ANI) shall evaluate these flights.

d. Academic/Ground Training. Utilize academic courseware as outlined in the MAWTS-1 course catalog and review MAWTS-1 ASPs, NFM, and KC-130 ANTP.

e. CRM shall be briefed for all flights and/or events.

TSOI-5100      3.0      \*      E      1 KC-130      A      (N)

Goal. Evaluate and standardize the TSO's instructional techniques on an LRN event.



Requirement. Instruct a TSO on LRN-2160.

Performance Standard. Effectively instruct the skills necessary to complete the appropriate event.

Prerequisite. LRN-2160 and APRB recommendation.

TSOI-5101      3.0      \*              E      1 KC-130      A      (N)

Goal. Evaluate and standardize instructional techniques on an AAR event.

Requirement. Instruct a TSO on an AAR event.

Performance Standard. Effectively instruct the skills necessary to complete the appropriate event.

Prerequisite. AAR-3600, AAR-3650, and APRB recommendation.

External Syllabus Support. Fixed wing, tilt-rotor, or helicopter receivers required.

TSOI-5102      3.0      \*              R      E      1 KC-130      A      (N)

Goal. Evaluate and standardize instructional techniques on a TN, AD, TR, or ALZ event.

Requirement. Instruct a TSO on a TN, AD, TR, or ALZ event.

Performance Standard. Effectively instruct the skills necessary to complete the appropriate event.

Prerequisite. TSOI-5100 and TSOI-5101.

Ordinance. As required.

External Syllabus Support. As required.

3. NATOPS Instructor/Assistant NATOPS Instructor (NI/ANI)

a. Purpose. Qualify IUT as a NATOPS Instructor/Assistant NATOPS Instructor (NI/ANI).

b. General. The purpose of this stage is to qualify the IUT as a NATOPS Instructor and emphasize standardization of instruction procedures.

c. Crew Requirements. An Assistant NATOPS Instructor will be evaluated by the Squadron NATOPS Instructor (SNI) or Group NATOPS Evaluator (GNE). The Squadron NATOPS Instructor will be evaluated by the Group NATOPS Evaluator.

d. Ground/Academic Training. The IUT shall be familiar with all applicable OPNAV and NATOPS directives.

NI-5140              3.0      \*              R      E      1 KC-130      A      (N)

Goal. NI/ANI check.

Requirement. Evaluate an Assistant NATOPS Instructor using standardized procedures.

Performance Standard. Per NATOPS and all current flight publications. Completion of NI-5140 meets the requirements for the TSO to be designated an Assistant NATOPS Instructor. At the discretion of the squadron commanding officer, a letter designating the TSO as an ANI shall be placed in the NATOPS jacket.

Prerequisite. TSOI-5102.

Ordinance. As required.

External Syllabus Support. As required.

#### 4. Night Systems Instructor (NSI)

a. Purpose. To qualify the TSO as an NSI. Upon successful completion of this stage and MAWTS-1 certification, TSO should be designated as an NSI by the squadron commanding officer.

b. General. A MAWTS-1 instructor shall provide certification for this qualification. Refer to MAWTS-1 Course Catalogue for current prerequisites and requirements.

c. Crew requirements. Refer to the MAWTS-1 KC-130 Course Catalog.

d. Academic/Ground Training. Refer to the MAWTS-1 KC-130 Course Catalog.

NSI-5150      1.5      \*              E   1   KC-130 A   NS

Goal. Evaluate and standardize the NSIUT's instructional techniques on an NS FAM event.

Requirement. Instruct a TSO on an NS FAM event.

Prerequisite. NSQ (2150, 2151), TSOI (5102), proficiency in the appropriate event, and APRB recommendation.

Performance Standard. Effectively instruct the skills necessary to complete the appropriate event.

NSI-5151      1.5      \*              E   1   KC-130 A   NS

Goal. Evaluate and standardize the NSI UT instructional techniques on a NS low level event.

Requirement. Instruct a TSO on a NS low level event.

Performance Standard. Effectively instruct the skills necessary to complete the appropriate event.

Prerequisite. NSI-5150 and TN-2251.

NSI-5152      1.5      \*              E   1   KC-130 A   NS

Goal. Evaluate and standardize NSI UT instructional techniques on an NS AD event.

Requirement. Instruct a TSO on an NS AD event.

Performance Standard. Effectively instruct the skills necessary to complete the appropriate event.

Prerequisite. NSI-5150 and AD-3750.

External Syllabus Support. As required.

NSI-5153      1.5      \*      R   E   1   KC-130   A   NS

Goal. Certification event for designation as a NSI.

Requirement. Demonstrate the ability to instruct TSO's on standardized procedures during an NS event. Completion of NSI-5153 meets the requirements for the TSO to be qualified as a Night Systems Instructor. At the discretion of the squadron commanding officer, a letter designating the TSO as an NSI shall be placed in the NATOPS jacket.

Performance Standard. Instruct the skills necessary to complete the appropriate event.

Prerequisite. NSI-5150, NSI-5151, and NSI-5152.

Ordinance. As required.

External Syllabus Support. As required.

5. Weapons Tactics Instructor (WTI)

a. Purpose. To certify the TSOI as a WTI capable of conducting ground and airborne instruction.

b. General. The KC-130 WTI Course is developed and instructed by MAWTS-1. Upon successful completion and MAWTS-1 certification, TSO should be designated as a WTI by the squadron commanding officer.

c. Ground Training. Refer to the MAWTS-1 KC-130 Course Catalog.

d. Flight Training. Refer to the MAWTS-1 KC-130 Course Catalog.

WTI-5999      Per MAWTS-1 Course Catalog

Goal. Evaluate and certify WTIs.

Requirement. Use standard MAWTS-1 instruction techniques as taught at the MAWTS-1 WTI course. Completion of the WTI course meets the requirements for the TSO to be designated as a WTI. At the discretion of the squadron commanding officer, a letter designating the TSO as a WTI shall be placed in the NATOPS jacket.

Performance Standard. Refer to the MAWTS-1 KC-130 Course Catalog.

Prerequisite. Refer to the MAWTS-1 KC-130 Course Catalog.

312. REQUIREMENTS, QUALIFICATIONS, DESIGNATIONS PHASE (RQD) PHASE (6000)

1. KC-130T NATOPS Evaluation POI

a. NATOPS Evaluators/Instructors shall conduct the NATOPS evaluation in accordance with OPNAVINST 3710.7 Series and other applicable directives, instructions, and orders.

b. The NATOPS Evaluator shall utilize the NATOPS Model Manager generated NATOPS Aviation Training Form (ATF) and the evaluation metrics required for the accomplishment and performance of the standardized criterion to determine whether the TSO completed the sortie. Prior to the Oral Examination, the NATOPS Evaluator shall review the Evaluatee's NATOPS Monthly emergency procedures examinations and simulator/cockpit-cabin drills for the previous twelve (12) months and previous NATOPS evaluations. At the discretion of the squadron commanding officer, a letter designating the TSO as NATOPS qualified shall be placed in the NATOPS jacket and APR.

c. NATOPS Evaluatees shall complete and have a graded Open Book, Closed Book, and Oral Examination prior to the commencement of the actual NATOPS evaluation event.

d. Crew Resource Management (CRM). A qualified and designated CRM Instructor or CRM Facilitator shall conduct initial and annual CRM Training per OPNAVINST 1542.7. CRM shall be briefed for all flights and/or events.

NTPS-6010 3.0 365 R E Open Book NATOPS Exam

Goal. The open book examination shall consist of, but not be limited to the question bank. The purpose of the open book examination portion of the written examination is to evaluate the TSO's knowledge of the appropriate publications and the aircraft.

Performance Standard. Achieve a minimum score of 3.5 on the open book examination.

NTPS-6011 1.0 365 R E Closed Book NATOPS Exam

Goal. The closed book examination shall be limited to the question bank. The purpose of the closed book examination portion of the written examination is to evaluate the TSO's knowledge of the concerning normal/emergency procedures and aircraft limitations.

Performance Standard. Achieve a minimum score of 3.3 on the closed book examination.

NTPS-6012 1.0 365 R E Oral NATOPS Examination

Goal. The oral examination shall consist of, but not be limited to the question bank. The instructor/evaluator may draw upon their experience to propose questions of a direct and positive manner and in no way be opinionated to evaluate the TSO's knowledge of the concerning normal/emergency procedures, aircraft limitations, and performance.

Performance Standard. Achieve a minimum grade of qualified on the oral examination.

NTPS-6118      2.0      365      R      E      1 KC-130      A      (N)

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Goal.    Annual NATOPS check.

Requirement.    The TSO will be tested on all previous instruction, knowledge of emergency procedures, and proper operation of all navigation equipment.

Performance Standards.    The TSO will perform all duties, emergency procedures, and properly operate all navigation equipment per NATOPS, OPNAVINST 3710.7, all applicable orders and directives, and squadron and TSO SOPs. At the discretion of the squadron commanding officer, a letter designating the TSO shall be placed in the NATOPS jacket and APR. The tracking code of NTPS-6118 shall be logged.

Prerequisite.    FAM-2100. Proficiency in appropriate event for which the TSO is being evaluated.

313. SYLLABUS MATRIX

KC-130T TACTICAL SYSTEMS OPERATOR (MOS 7372 / 7380)														
2000 CORE SKILL PHASE														
STAGE	TRNG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
FAMILIARIZATION (FAM)														
FAM	2100	4.0		365	R		A	1		(N)		FAM		201
		4.0												
NIGHT SYSTEMS (NS)														
NS	2150	3.0		365	R		A	1		NS	2100	HLL NS FAM	2100	204
NS	2151	3.0		365	R		A	1		NS	2150	LLL NS FAM	2150, 2100	205
		6.0												
LONG RANGE NAVIGATION (LRN)														
LRN	2160	5.0		365	R		A	1		(N)	2100	LRN	2100, (2150 HLL), (2151 LLL)	250
		5.0												
TACTICAL NAVIGATION (TN)														
TN	2200	2.0		365	R		A	1		D	2100	DAY TN	2100	221
TN	2250	2.0		365	R		A	1		NS	2200, 2150	HLL TN	2100, 2150, 2200	223
TN	2251	2.0		180	R		A	1		NS	2250	LLL TN	2100, 2150, 2151, 2200, 2250	324
		6.0												
LOW ALTITUDE TACTICS (LAT)														
LAT	2260	1.0		*	R		A	1		D	2200	LAT INTRO	2100, 2200	321
LAT	2261	1.0		365	R		A	1		D	2260	LAT QUAL	2100, 2200 2260	322
		2.0												
THREAT REACTION (TR)														
TR	2400	2.0		*	R		A/S	1		D	2200, 2100	TR INTRO	2100	260 360
TR	2401	2.0		365	R		A/S	1		(N)	2400	IR TR	2100, (2150 HLL), (2151 LLL)	261
		4.0												
PHASE TOTALS														
		27.0												

KC-130T TACTICAL SYSTEMS OPERATOR (MOS 7372 / 7380)														
3000 MISSION SKILL PHASE														
STAGE	TRNG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
ASSAULT LANDING ZONE (ALZ)														
ALZ	3500	1.5		365			A	1		(N)	2100	TAC ARR	2100, (2150 HLL), (2151 LLL)	370
ALZ	3501	1.5		365	R		A	1		(N)	3500	SCA	3500, 2100, (2150 HLL), (2151 LLL)	271
		3.0												
AIR-TO-AIR REFUELING (AAR)														
AAR	3600	2.0		365	R		A	1		(N)	2100	FWAAR/ TRAAR	2100, (2150 HLL), (2151 LLL)	210
AAR	3601	2.0		365			A	1		D	2100	DAY HAAR	2100	212
AAR	3650	2.0		365	R		A	1		NS	3601	NVD HAAR	3601, 2100, (2150 HLL), (2151 LLL)	213
		6.0												
AIR DELIVERY (AD)														
AD	3700	1.5		365			A	1		(NS)	2100	CARGO AD	2100, (2150 HLL), (2151 LLL)	241
AD	3701	1.5		365			A	1		(NS)	2100	PERS AD	2100, (2150 HLL), (2151 LLL)	242
AD	3750	1.5		365	R		A	1		NS	(3700 IF CARGO) (3701 IF PERS)	NS AD	2100, (2150 HLL), (2151 LLL), 3700, 3701	341
		4.5												
PHASE TOTALS														
		13.5												

KC-130T TACTICAL SYSTEMS OPERATOR (MOS 7372 / 7380)														
4000 CORE PLUS SKILL PHASE														
STAGE	TRNG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
THREAT REACTION (TR)														
TR	4400	2.0		365	R		A/S	1		(N)	2400, 2200	RADAR TR	2100, (2150 HLL), (2151 LLL)	361
		2.0												
DEFENSIVE TACTICS (DT)														
DT	4410	1.0		*	R		A	1		D	2261	DEFTAC	2100	462
		1.0												
AIR-TO-AIR REFUELING (AAR)														
AAR	4600	3.0		*			A	2		(N)	3600, 3650, 2100, (2150 HLL), (2151 LLL)	LRAAR LEAD	3600, 3650, 2100, (2150HLL), (2151LLL)	410
AAR	4601	3.0		1095	R	E	A	2		(N)	4600	RNDV CNT	4600	411
		6.0												
AIR DELIVERY (AD)														
AD	4700	1.0		365	R		A	1		(N)	3701	HIGH AD	2100, (2150 HLL), (2151 LLL)	442
AD	4701	1.0		*	R		A	1		(N)	3700	JPADS AD	3700, 2100, (2150 HLL), (2151 LLL)	441
		2.0												
BATTLEFIELD ILLUMINATION (BI)														
BI	4710	1.0		730	R		A	1		N	2100	BI	2100, (2150 HLL), (2151 LLL)	444
		1.0												
PHASE TOTALS														
		12.0												



KC-130T TACTICAL SYSTEMS OPERATOR (MOS 7372 / 7380)														
5000 INSTRUCTOR TRAINING PHASE														
STAGE	TRNG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
TSO INSTRUCTOR (TSOI)														
TSOI	5100	3.0		*		E	A	1		(N)	2160, APRB REC	LRN	2100, (2150HLL) (2151LLL)	500
TSOI	5101	3.0		*		E	A	1		(N)	3600, 3650, APRB REC	AAR	2100, (2150HLL) (2151LLL)	501
TSOI	5102	3.0		*	R	E	A	1		(N)	5100, 5101	TAC	2100, (2150HLL) (2151LLL)	502
		9.0												
NATOPS INSTRUCTOR (NI)														
NI	5140	3.0		365	R	E	A	1		(N)	5102	NATOPS INST	2100	692
		3.0												
NIGHT SYSTEMS INSTRUCTOR (NSI)														
NSI	5150	1.5		*		E	A	1		NS	5102, 2150, 2151	NS FAM	2100, (2150HLL), (2151LLL)	510
NSI	5151	1.5		*		E	A	1		NS	5150, 2251	NS LL	2100, (2150HLL), (2151LLL)	511
NSI	5152	1.5		*		E	A	1		NS	5150, 3750	NS AD	2100, (2150HLL), (2151LLL)	512
NSI	5153	1.5		*	R	E	A	1		NS	5150, 5151, 5152	NS INST CHECK	2100, (2150HLL), (2151LLL)	602
		6.0												
WEAPONS TACTICS INSTRUCTOR (WTI)														
WTI	5999	*		*		E						MAWTS-1		691
		0.0												
PHASE TOTALS														
FLIGHT HOURS		18.0		SIM HOURS										

KC-130T TACTICAL SYSTEMS OPERATOR (MOS 7372 / 7380)														
5000 INSTRUCTOR TRAINING PHASE														
STAGE	TRNG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
NATOPS (NTPS)														
NTPS	6010			365	R	E						OPEN BK		
NTPS	6011			365	R	E						CLSD BK		
NTPS	6012			365	R	E						ORAL EX		
NTPS	6118	2.0		365	R	E	A	1		(N)	2100	NTPS CK	2100	690
		2.0												
PHASE TOTALS														
FLIGHT HOURS		2.0		SIM HOURS										

314. SYLLABUS EVALUATION FORMS. Contact MAWTS-1 to receive TSO T&R syllabus evaluation forms.

CHAPTER 4

KC-130T FLIGHT ENGINEER (MOS 6276)

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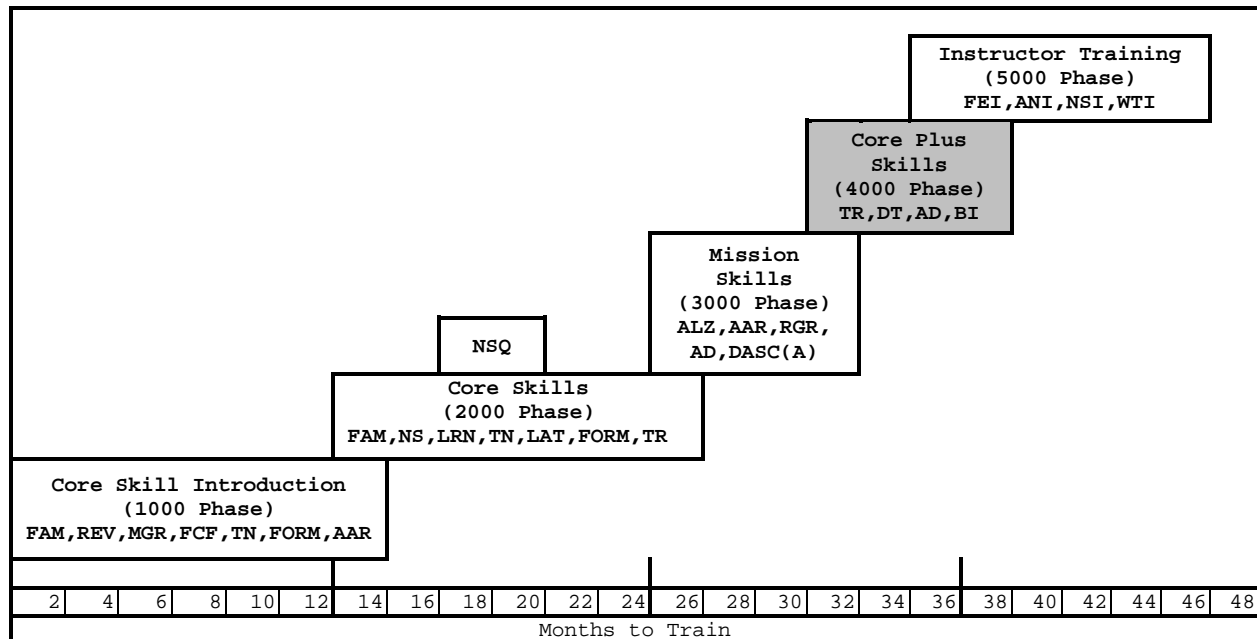
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# CHAPTER 4

## KC-130T FLIGHT ENGINEER MOS 6276

400. KC-130T FLIGHT ENGINEER 6276 INDIVIDUAL TRAINING AND READINESS REQUIREMENTS. This T&R Syllabus is based on specific goals and performance standards designed to ensure individual proficiency in Core and Mission Skills. The goal of this chapter is to develop individual and unit warfighting capabilities.

401. KC-130T FLIGHT ENGINEER TRAINING PROGRESSION MODEL. The training progression model below provides recommended core skill, qualification, and designation attainment timelines for the average Flight Engineer.



402. INDIVIDUAL CORE SKILL PROFICIENCY (CSP) REQUIREMENTS. A CSP crew consists of individuals representing each crew position who have achieved and currently maintain Individual CSP. In order to be considered proficient in a Core Skill, an individual must attain and maintain proficiency in Core Skill events as delineated in the below paragraphs.

1. Events Required to Attain Individual CSP. To initially attain CSP in a Core Skill, an individual must simultaneously have a proficient status in all 2000 phase T&R events listed for that Core Skill:

INDIVIDUAL CORE SKILL PROFICIENCY (CSP) ATTAIN TABLE					
T&R events required to Attain CSP (2000 Phase)					
NS	LRN	TN	LAT	SEC FORM	IR TR
2150R	2160R	2200R	2260R	2300R	2400R
2151R		2250R			
		2251R			

Gray highlight & an R suffix on the event code = Refresher POI

2. Events Required to Maintain Individual CSP. To maintain CSP in a Core Skill, an individual must maintain proficiency in all 2000 phase T&R events listed for that Core Skill:

INDIVIDUAL CORE SKILL PROFICIENCY (CSP) MAINTAIN TABLE					
T&R events required to Maintain CSP (2000 Phase)					
NS	LRN	TN	LAT	SEC FORM	IR TR
2151R	2160R	2251R	2260R	2300R	2400R
Gray highlight & an R suffix on the event code = Refresher POI					

403. INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) REQUIREMENTS. An MSP crew consists of individuals representing each crew position who have achieved and currently maintain Individual MSP. To be considered proficient in a Mission Skill, an individual must attain and maintain proficiency in Mission Skill events as delineated in the below paragraphs.

1. Events Required to Attain Individual MSP. To initially attain MSP in a Mission Skill, an individual must simultaneously have a proficient status in all 3000 phase T&R events listed for that Mission Skill:

INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) ATTAIN TABLE				
T&R events required to Attain MSP (3000 Phase)				
ALZ	AAR	RGR	AD	DASC
3500R	3600R	3660R	3700R	3800R
3550R	3601R		3750R	
3551R	3650R			
Gray highlight & an R suffix on the event code = Refresher POI				

2. Events Required to Maintain Individual MSP. To maintain MSP in a Mission Skill, an individual must maintain proficiency in all 3000 phase T&R events listed for that Mission Skill:

INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) MAINTAIN TABLE				
T&R events required to Maintain MSP (3000 Phase)				
ALZ	AAR	RGR	AD	DASC
3551R	3600R	3660R	3750R	3800R
	3650R			
Gray highlight & an R suffix on the event code = Refresher POI				

3. Events Required to Attain Individual Proficiency in Core Plus / Mission Plus Skills. Proficiency in Core Plus Skills is not required to obtain unit CSP. Training to Core Plus Skills is at the discretion of the unit commanding officer. To initially attain proficiency in a Core Plus Skill, an individual must simultaneously have a proficient status in all T&R events listed for that Core Plus Skill:

INDIVIDUAL CORE PLUS SKILL ATTAIN TABLE			
T&R events required to Attain Core Plus Skill (4000 Phase)			
CORE PLUS SKILLS			MISSION PLUS
RF TR	DT	AD	BI
4400R	4410R	4700R	4710R
Gray highlight & an R suffix on the event code = Refresher POI			

4. Events Required to Maintain Individual Proficiency in Core Plus / Mission Plus Skills. To maintain proficiency in a Core Plus Skill, an individual must maintain proficiency in all T&R events listed in the table below for that Core Plus Skill:

INDIVIDUAL CORE PLUS SKILL MAINTAIN TABLE			
T&R events required to Maintain Core Plus Skill (4000 Phase)			
CORE PLUS SKILLS			MISSION PLUS
RF TR	DT	AD	BI
4400R	4410R	4700R	4710R
Gray highlight & an R suffix on the event code = Refresher POI			

404. REQUIREMENTS, QUALIFICATION AND DESIGNATION TABLES. The tables below delineate T&R events required to be completed to attain proficiency, and initial qualifications and designations. In addition to event requirements, all required stage lectures, briefs, squadron training, prerequisites, and other criteria shall be completed prior to completing final events. Qualification and designation letters signed by the commanding officer shall be placed in the individual's NATOPS jacket. Loss of proficiency in all qualification events causes the associated qualification to be lost. Regaining a qualification requires completing all R-coded syllabus events associated with that qualification.

INDIVIDUAL QUALIFICATION REQUIREMENTS	
Qualification	Event Requirements
NSQ	NITE LAB, NVD I & II, NS-2150, NS-2151, TN-2250, TN-2251 and requires 10 hours of total NVD time with at least 5 hours of Low Light Level (LLL) time.
FE-2 NATOPS EVALUATION	NTPS-6116. Core Introduction Phase complete and a designation letter signed by squadron commanding officer.
ANNUAL NATOPS	NTPS-6118. Annual NATOPS evaluation designation.
INDIVIDUAL DESIGNATION REQUIREMENTS	
Designation	Event Requirements
ENGINE RUN	RQD-6100. Upon completion of RQD-6100, the squadron commanding officer may designate the FE.
RIGHT SEAT TAXI OBSERVER	RQD-6101. Upon completion of RQD-6101, the squadron commanding officer may designate FE a qualified right seat taxi observer.
FCF	FCF-6106.
FE-1 NATOPS EVALUATION	NTPS-6117. Core and Mission Skill Phase complete. May also instruct training for 2000 & 3000 Phase FM codes.
FEI	SFEI-5100 - FEI-5108. 1000 flight hours as a qualified Flight Engineer and a designation letter signed by the squadron commanding officer.
ASSISTANT NATOPS INSTRUCTOR (ANI)	NI-5140. 1500 Flight Hours as qualified Flight Engineer, certification by the Squadron NATOPS Instructor or NATOPS Evaluator and a designation letter signed by the squadron commanding officer.
NATOPS INSTRUCTOR/ EVALUATOR (NI/GNE)	NI-5141. 1500 Flight Hours as qualified Flight Engineer, NI shall be instructed by the GNE or Model Manager. GNE shall be instructed by the Model Manager. GNE is designated by the MAG commanding officer.
NSI	NSI-5150 - NSI-5153. Upon certification by MAWTS-1, the FE may be designated a NSI by the commanding officer.
WTI	WTI-5999. Upon certification by MAWTS-1, the FE may be designated a WTI by the squadron commanding officer.

405. PROGRAMS OF INSTRUCTION (POI)

1. Basic (B) POI. The time required to train a KC-130 Flight Engineer to Core Plus will vary depending on the previous Flight Engineer's experience. Basic, Transition, and Series Conversion Flight Engineers shall fly the entire Basic POI. All initial flying codes will only utilize the aircraft.

WEEKS	COURSE	PERFORMING ACTIVITY
1-12	KC-130 FE Ground Course	HTU NAS/JRB FT WORTH
13-15	KC-130 Flight Simulator	Tactical Squadron
16-52	Core Skill Introduction Training	Tactical Squadron
52-100	Core Skill Training	Tactical Squadron
101-124	Mission Skill Training	Tactical Squadron
125-150	Core Plus Training	Tactical Squadron

2. Refresher (R) POI. Refresher Flight Engineers represent a varying background and should fly flights coded with an "R". Squadron commanding officers will review the qualifications, previous experience, currency, and demonstrated ability of Refresher Flight Engineers with a view towards waiving and/or combining required flights.

WEEKS	COURSE	PERFORMING ACTIVITY
1-2	KC-130 Flight Simulator	Tactical Squadron
4-6	Core Skill Introduction Training	Tactical Squadron
7-12	Core Skill Training	Tactical Squadron
13-14	Mission Skill Training	Tactical Squadron

3. Instructor Pilot POI.

WEEKS	COURSE	PERFORMING ACTIVITY
1-2	Flight Engineer Instructor	Tactical Squadron
1	Night Systems Instructor	MAWTS-1
1-7	Weapons Tactics Instructor	MAWTS-1

406. ACADEMIC TRAINING

1. Academic training shall be conducted for each phase/stage of the syllabus. Where indicated, standardized academic training materials exist and may be obtained from the sponsoring activity.

2. External academic courses of instruction available to complete the syllabus are listed below:



COURSE	ACTIVITY
Naval Aircrew Candidate Course*	NAS Pensacola, FL
Survival, Evasion, Resistance, and Escape (SERE) Course*	NAS Brunswick ME NAS North Island CA
Flight Engineer Organizational Ground* Maintenance Course	HTU NAS JRB FT Worth, TX
NITE lab*	Tactical Squadron
Flight Engineer Initial Qualification*	Tactical Squadron
Flight Engineer Mission Qualification*	Tactical Squadron
Weapons and Tactics Instructor (WTI)*	MAWTS-1 Yuma, AZ
Environmental Survival Courses	Regional/Seasonal Survival Schools
Advanced Airlift Tactics Training Course (AATTC)	AATTC, St. Joseph MO
*External ground training courses of instruction which are <u>required</u> to complete the syllabus.	

#### 407. CORE SKILL INTRODUCTION PHASE (1000)

##### 1. General

a. Upon completion of this phase of training, the Flight Engineer will be NATOPS qualified as a FE-2. The Flight Engineer will be capable of basic aircraft operation to include emergency procedures and crew resource management. The NATOPS check may be conducted any time after completion of the Core Skill Introduction Phase. Commanders shall not designate student Flight Engineers as an FE-2 until satisfactory completion of the entire Core Skill Introduction Phase. Upon the completion of the FE-2 NATOPS check, Flight Engineers shall log the NTPS-6116 tracking code.

b. Crew Resource Management shall be briefed for all flights and events.

##### 2. Familiarization (FAM)

a. Purpose. Familiarize the student Flight Engineer with his responsibilities and duties in the correct use of aircraft checklists, crew coordination, normal & emergency procedures, remedial actions for system malfunctions, aircraft limitations, and performance data under various flight conditions.

##### b. General

(1) One hour of formal classroom training is required for 1 hour of flight simulator training. Refresher Flight Engineers need only to complete syllabus periods annotated with an "R". Aircraft utilization is authorized if the OFT is not available.

(2) Upon completion of simulator training, the student Flight Engineer will be proficient and have demonstrated a thorough working knowledge of all aircraft systems, aircraft checklists, crew coordination, diagnosis of airborne malfunctions, and remedial actions that can be accomplished while airborne.

(3) The flight portion of training deals with actual flight operations. The student Flight Engineer must possess and display a thorough

working knowledge of all aircraft systems prior to the start of flight training.

c. Crew Requirements. Shall be instructed/evaluated by a Flight Engineer Instructor.

d. Academic/Ground Training. Prior to SFAM-1100, all Basic, Transition, and Series Conversion Flight Engineers shall complete the ground school course consisting of aircraft systems descriptions, normal and emergency procedures, cockpit resource management, basic weight and balance, aircraft pre-flight and post-flight procedures, emergency evacuation procedures, bailout procedures, donning and use of all emergency equipment. The familiarization flight stage requires a minimum of 2 hours of ground instruction prior to each flight.

SFAM-1000	2.0	*	IPT/CPT/OFT/WST	S
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Goal. Introduce the Flight Engineers responsibilities/duties, crew coordination, aircraft limitations, and use of expanded checklists.

Requirement. Student Flight Engineer shall perform responsibilities/duties associated with the expanded checklist from the cockpit checklist through the engine run-up checklist with assistance as necessary from the Flight Engineer Instructor. Student shall demonstrate knowledge of NATOPS aircraft limitations.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. Ground academic training.

SFAM-1001	2.0	*	IPT/CPT/OFT/WST	S
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Goal. Introduce the Flight Engineer's responsibilities/duties, crew coordination, aircraft limitations, and use of expanded checklists.

Requirement. Review previous instructions as necessary. Student Flight Engineer shall perform responsibilities/duties associated with the expanded checklist from the before take-off checklist through the secure checklist with assistance as necessary from the Flight Engineer Instructor. Student shall demonstrate knowledge of NATOPS aircraft limitations.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. SFAM-1000.

SFAM-1002	2.0	*	IPT/CPT/OFT/WST	S
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Goal. Introduce start malfunctions.

Requirement. Review previous instructions as necessary. The student Flight Engineer shall identify start malfunctions and perform remedial actions IAW the FRS simulator guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. SFAM-1001.

SFAM-1003	2.0	*	IPT/CPT/OFT/WST		S
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Goal. Review ground emergency malfunctions.

Requirement. Review previous instruction as necessary. Student Flight Engineer shall demonstrate proper execution of responsibilities/duties, and perform all checklists observing applicable aircraft limitations IAW FRS simulator guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. SFAM-1002.

SFAM-1004	2.0	*	R	E	IPT/CPT/OFT/WST	S
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Goal. Evaluate the student Flight Engineer's progress in cockpit procedures, start malfunctions, and ground emergency procedures IAW NATOPS and FRS simulator guide.

Requirement. Student Flight Engineer shall demonstrate proper execution of responsibilities/duties, and perform all checklists observing applicable aircraft limitations IAW FRS simulator guide. The student Flight Engineer shall satisfactorily complete progress evaluation prior to progressing to the OFT stage of simulator training.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. SFAM-1003.

SFAM-1005	2.0	*	R	IPT/CPT/OFT/WST		S
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Goal. Introduce the student Flight Engineer to the aircraft engine systems, malfunction, and emergency procedures.

Requirement. Review previous instruction as necessary. Student Flight Engineer shall perform remedial actions and emergency procedures related to aircraft engine systems per the FRS simulator guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. SFAM-1004.

SFAM-1006      2.0      \*      R      IPT/CPT/OFT/WST      S

Goal. Introduce aircraft propeller systems, malfunctions, and emergency procedures.

Requirement. Review previous instruction as necessary. Student Flight Engineer shall demonstrate knowledge of aircraft propeller systems and perform remedial actions and emergency procedures related to aircraft propeller systems IAW FRS simulator guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. SFAM-1005.

SFAM-1007      2.0      \*      R      IPT/CPT/OFT/WST      S

Goal. Introduce aircraft electrical systems, malfunctions, and emergency procedures.

Requirement. Review previous instruction as necessary. Student Flight Engineer shall demonstrate knowledge of aircraft electrical systems and perform remedial actions, emergency procedures related to aircraft electrical systems IAW FRS simulator guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. SFAM-1006.

SFAM-1008      2.0      \*      R      IPT/CPT/OFT/WST      S

Goal. Introduce aircraft bleed air, anti-ice, and deicing systems, malfunctions, and emergency procedures.

Requirement. Review previous instruction as necessary. Student Flight Engineer shall demonstrate knowledge of aircraft bleed air, anti-ice, and deicing systems and perform remedial actions and emergency procedures related to aircraft bleed air, anti-ice, and deicing systems.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. SFAM-1007.

SFAM-1009      2.0      \*      R      IPT/CPT/OFT/WST      S

Goal. Introduce aircraft fuel systems, malfunctions, and emergency procedures.

Requirement. Review previous instruction as necessary. Student Flight Engineer shall demonstrate knowledge of aircraft fuel systems and perform remedial actions and

emergency procedures related to aircraft fuel systems IAW FRS simulator guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. SFAM-1008.

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SFAM-1010	2.0	*	R	IPT/CPT/OFT/WST	S
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Goal. Introduce aircraft hydraulic systems, malfunctions, and emergency procedures.

Requirement. Review previous instruction as necessary. Student Flight Engineer shall demonstrate knowledge of aircraft hydraulic systems and perform remedial actions and emergency procedures related to aircraft hydraulic systems IAW FRS simulator guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. SFAM-1009.

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SFAM-1011	2.0	*	R	IPT/CPT/OFT/WST	S
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Goal. Introduce aircraft air conditioning/pressurization systems, malfunctions, and emergency procedures.

Requirement. Review previous instruction as necessary. Student Flight Engineer shall demonstrate knowledge of aircraft air conditioning and pressurization systems and perform remedial actions, emergency procedures related to aircraft air conditioning/pressurization systems IAW FRS simulator guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. SFAM-1010.

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SFAM-1012	2.0	*	R	IPT/CPT/OFT/WST	S
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Goal. Introduce aircraft comm/nav systems, voice procedures, malfunctions, and emergency procedures.

Requirement. Review previous instruction as necessary. Student Flight Engineer shall demonstrate knowledge of aircraft comm/nav systems and voice procedures and perform remedial actions and emergency procedures related to aircraft comm/nav systems IAW FRS simulator guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. SFAM-1011.

SFAM-1013	2.0	*	R	IPT/CPT/OFT/WST	S
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Goal. Introduce aircraft air-to-air refueling systems, malfunctions, and emergency procedures.

Requirement. Review previous instruction as necessary. Student Flight Engineer shall demonstrate knowledge of aircraft air-to-air refueling systems and perform remedial actions and emergency procedures related to aircraft air-to-air refueling systems IAW FRS simulator guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. SFAM-1012.

SFAM-1014	2.0	*	R	E	IPT/CPT/OFT/WST	S
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Goal. Evaluate simulator progress.

Requirement. The student Flight Engineer shall successfully complete a standard evaluation in the correct use of aircraft checklists, crew coordination, normal & emergency procedures, remedial actions for system malfunctions, and aircraft performance data.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. SFAM-1013.

FAM-1100	4.0	*	R	1 KC-130	A	(N)
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Goal. Familiarize the student Flight Engineer with correct turnaround inspection and normal flight operations.

Requirement. The student Flight Engineer shall be familiar with correct turnaround inspection, and normal flight operations IAW NA01-75GAA-6-1 and NFM.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. SFAM-1014.

FAM-1101	4.0	*	R	1 KC-130	A	(N)
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Goal. Familiarize the student Flight Engineer with time management of turnaround inspection, computation of performance data, and normal flight operations.

Requirement. The student Flight Engineer shall be familiar with time management of turnaround inspections, computation of performance data, and normal flight operations IAW NA01-75GAA-6-1 and NA0175GAA-1.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. FAM-1100.

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FAM-1102	4.0	*	R	1	KC-130	A	(N)
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Goal. Refine time management of turnaround inspection responsibilities and duties to include performance data computation, Weight and Balance Form 365-4 completion, and normal flight operations during night time conditions.

Requirement. The student Flight Engineer shall be able to coordinate and perform aircraft turnaround inspection per current instructions utilizing proper time management to accomplish all required tasks, including correct performance data computation, accurate Weight and Balance Form 365-4 completion, and normal flight operations during night time conditions.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. FAM-1101.

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FAM-1103	4.0	*	R	1	KC-130	A	(N)
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Goal. Familiarize the student Flight Engineer in all weather operations and procedures per NFM.

Requirement. The student Flight Engineer shall be able to perform his duties in all weather conditions.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. FAM-1102.

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FAM-1104	4.0	*	R	1	KC-130	A	(N)
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Goal. Familiarize student Flight Engineer with simulated engine out approach, landing and go around procedures.

Requirement. The student Flight Engineer shall be familiar with all normal and emergency procedures related to engine out flight conditions.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. FAM-1103.

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FAM-1105	4.0	*	R	1	KC-130	A	(N)
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Goal. Familiarize the student Flight Engineer on extended over water flight operations to include mission planning,

range prediction, range control, endurance, and use of engine/fuel logs.

Requirement. The student Flight Engineer shall be able to perform normal procedures and mission planning; and use aircraft performance data (range prediction, range control, & endurance), and engine/fuel logs associated with extended over water flights.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. FAM-1104.

### 3. Systems Review (REV)

a. Purpose. Review aircraft systems, systems operation, system malfunctions, corrective actions, and troubleshooting per current instructions.

b. General. This portion of training deals with actual flight operations. The student Flight Engineer must possess and display a thorough working knowledge of all aircraft systems prior to the start of the flight training review syllabus. The Flight Engineer Instructor may induce malfunctions and simulated emergencies as practical.

c. Crew Requirements. Shall be instructed/evaluated by a Flight Engineer Instructor.

d. Academic/Ground Training. The systems review stage requires a minimum of 2 hours of ground instruction prior to each flight.

REV-1130	4.0	*	1 KC-130	A	D
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Goal. Review aircraft engines and APU.

Requirement. The student Flight Engineer shall be knowledgeable on aircraft engine operation as it pertains to interoperability of the aircraft during flight operations, possible malfunctions, troubleshooting, and corrective actions IAW FRS student guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. FAM-1105.

REV-1131	4.0	*	1 KC-130	A	D
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Goal. Review aircraft engine related systems.

Requirement. The student Flight Engineer shall be knowledgeable on aircraft engine related systems operation as it pertains to interoperability of the aircraft during flight operations, possible malfunctions, troubleshooting, and corrective actions IAW FRS student guide.



Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. REV-1130.

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REV-1132	4.0	*	1 KC-130	A	D
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Goal. Review aircraft propeller system.

Requirement. The student Flight Engineer shall be knowledgeable on aircraft propeller system operation as it pertains to interoperability of the aircraft during flight operations, possible malfunctions, troubleshooting, and corrective actions including the blade assemblies, barrel assembly, dome assembly, spinner assembly, anti-icing/deicing assemblies, control assembly, governing system, synchrophasing system, and propeller controls IAW FRS student guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. REV-1131.

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REV-1133	4.0	*	1 KC-130	A	D
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Goal. Review the aircraft AC electrical systems.

Requirement. The student Flight Engineer shall be knowledgeable on AC electrical systems operation as it pertains to interoperability of the aircraft during flight operations, possible malfunctions, troubleshooting, and corrective actions including the primary and secondary systems, indicators, and system warning lights IAW FRS student guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. REV-1132.

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REV-1134	4.0	*	1 KC-130	A	D
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Goal. Review the aircraft DC electrical system.

Requirement. The student Flight Engineer shall be knowledgeable in aircraft DC electrical systems as it pertains to interoperability of the aircraft during flight operations including TR units, the battery system, indicators, and system warning lights, their operation, possible malfunctions, troubleshooting, and corrective actions IAW FRS student guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. REV-1133.

REV-1135      4.0      \*      1 KC-130      A      D

Goal. Review bleed air systems, anti-icing and deicing systems.

Requirement. The student Flight Engineer shall be knowledgeable on the aircraft bleed air systems as it pertains to interoperability of the aircraft during flight operations to include the air turbine motor, associated bleed air valves & ducting, nacelle preheat, bleed air system controls, and isolation valves, wing and empennage anti-icing, propeller anti-icing/de-icing, and NESA system, possible malfunctions, troubleshooting, and corrective actions IAW FRS student guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. REV-1134.

REV-1136      4.0      \*      1 KC-130      A      D

Goal. Review air conditioning, pressurization, and oxygen systems.

Requirement. The student Flight Engineer shall be knowledgeable on aircraft air conditioning systems as it pertains to interoperability of the aircraft during flight operations including the flight station and cargo compartment air conditioning systems, outflow valve, safety valve, cabin pressure controls, and oxygen systems operation, possible malfunctions, troubleshooting, and corrective actions IAW FRS student guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. REV-1135.

REV-1137      4.0      \*      1 KC-130      A      D

Goal. Review the aircraft fuel systems.

Requirement. The student Flight Engineer shall be knowledgeable on aircraft fuel systems as it pertains to interoperability of the aircraft during flight operations including the refueling/de-fueling system & procedures, tank configuration, water removal, cross feed, fuel transfer & jettison, IFR, single-point refueling systems, fuel system controls, and the fuel indicating systems operation, possible malfunctions, troubleshooting, and corrective actions IAW FRS student guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. REV-1136.

REV-1138      4.0      \*      1 KC-130      A      D

Goal. Review the aircraft utility hydraulic systems.

Requirement. The student Flight Engineer shall be knowledgeable on the utility hydraulic systems as it pertains to interoperability of the aircraft during flight operations to include the basic hydraulic system and sub systems (portion of flight controls, landing gear, IFR, flaps, wheel brakes, and nose wheel steering systems) possible malfunctions, troubleshooting, and corrective actions IAW FRS student guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. REV-1137.

REV-1139      4.0      \*      1 KC-130      A      D

Goal. Review the aircraft booster and auxiliary hydraulic systems.

Requirement. The student Flight Engineer shall be knowledgeable on aircraft booster & auxiliary hydraulic systems as it pertains to interoperability of the aircraft during flight operations to include basic hydraulic systems & subsystems portion of the flight controls, ramp & aft cargo door, emergency brakes, and the emergency nose landing gear extension systems operation, possible malfunctions, troubleshooting, and corrective actions IAW FRS student guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. REV-1138.

REV-1140      4.0      \*      1 KC-130      A      D

Goal. Review the aircraft communications systems.

Requirement. The student Flight Engineer shall be knowledgeable on communication systems operation as it pertains to interoperability of the aircraft during flight operations, voice procedures, possible malfunctions, troubleshooting, and corrective actions IAW FRS student guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. REV-1139.

REV-1141      4.0      \*      1 KC-130      A      D

Goal. Review navigation and flight instrument systems.

Requirement. The student Flight Engineer shall be knowledgeable on aircraft navigation system operation as it pertains to interoperability of the aircraft during flight operations, troubleshooting, and corrective actions IAW FRS student guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. REV-1140.

REV-1142	4.0	*	1	KC-130	A	D
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Goal. Review aircraft air-to-air refueling systems.

Requirement. The student Flight Engineer shall be knowledgeable on aircraft air-to-air refueling systems operation as it pertains to interoperability of the aircraft during flight operations, possible malfunctions, troubleshooting, and corrective actions IAW FRS student guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. REV-1141.

#### 4. Intermediate Progress Evaluation (CK)

a. Purpose. Evaluate the student Flight Engineer's overall progress.

b. General. The student Flight Engineer shall complete all familiarization and review codes prior to CK-1150. Flight portion of the progress evaluation should be conducted on an extended over water flight or an extended overland flight to include a Remain Overnight (RON).

c. Crew requirements. Shall be instructed/evaluated by a Flight Engineer Instructor.

CK-1150	4.0	*	E	1	KC-130	A	(N)
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Goal. Evaluate the student Flight Engineer's overall progress.

Requirement. The student Flight Engineer shall have demonstrated his knowledge of normal and emergency procedures, all aircraft systems operations, possible malfunctions, troubleshooting, and corrective actions IAW FRS student guide and NFM.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. REV-1142.

5. Maintenance Ground Runs (MGR)

a. Purpose. Familiarize the student Flight Engineer on post maintenance run-up procedures.

b. General. All required FCF's will be conducted upon completion of post maintenance run-ups.

c. Crew Requirements. Shall be instructed/evaluated by a Flight Engineer Instructor.

d. Academic/Ground Training. Each event requires 1 hour of classroom instruction.

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SMGR-1160	3.0	*	IPT/CPT/OFT/WST		S/A
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Goal. Introduce ground maintenance run-up procedures.

Requirement. The student Flight Engineer shall be familiar with ground maintenance run-up procedures IAW FRS Maintenance Ground run-up and Functional check-flight student guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable maintenance ground run-up and NATOPS flight manuals.

Prerequisite. CK-1150.

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SMGR-1161	3.0	*	IPT/CPT/OFT/WST		S/A
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Goal. Refine ground maintenance run-up procedures.

Requirement. The student Flight Engineer shall be proficient on ground maintenance run-up procedures IAW FRS Maintenance Ground run-up and Functional check-flight student guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable maintenance ground run-up and NATOPS flight manuals.

Prerequisite. SMGR-1160.

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MGR-1162	4.0	*	R	1 KC-130	A	D
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Goal. Refine ground maintenance run-up procedures.

Requirement. The student Flight Engineer shall perform a phase ground maintenance run-up from the left seat IAW FRS Maintenance Ground run-up and Functional check-flight student guide.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable maintenance ground run-up and NATOPS flight manuals.

Prerequisite. SMGR-1161.

MGR-1163      4.0      \*      1 KC-130    A    D

Goal.    Refine ground maintenance run-up procedures.

Requirement.    The student Flight Engineer shall perform a phase ground maintenance run-up from the left seat IAW FRS Maintenance Ground run-up and Functional check-flight student guide.

Performance Standard.    Student Flight Engineer shall perform responsibilities/duties IAW applicable ground run-up and NATOPS flight manuals.

Prerequisite.    MGR-1162.

MGR-1164      4.0      \*      1 KC-130    A    D

Goal.    Maintenance ground run-up check.

Requirement.    The student Flight Engineer shall be proficient on phase maintenance ground run-up procedures IAW FRS Maintenance Ground run-up and Functional check-flight student guide.

Performance Standard.    Student Flight Engineer shall perform responsibilities/duties IAW applicable ground run-up and NATOPS flight manuals.

Prerequisite.    MGR-1163.

#### 6. Functional Check Flights (FCF)

a. Purpose.    Familiarize the student Flight Engineer on FCF procedures.

b. General.    All required FCF's will be conducted upon completion of post maintenance run-ups.

c. Crew Requirements.    Shall be instructed/evaluated by a Flight Engineer Instructor.

d. Academic/Ground Training.    Each flight requires 1 hour of classroom instruction.

SFCF-1165      4.0      \*      IPT/CPT/OFT/WST    S/A

Goal.    Introduce FCF procedures to student Flight Engineer per current instructions.

Requirement.    The student Flight Engineer shall be familiar with the FCF procedures IAW FRS Maintenance Ground run-up and Functional check-flight student guide.

Performance Standard.    Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite.    MGR-1164.

SFCF-1166      4.0      \*      IPT/CPT/OFT/WST      S/A

Goal.    Refine FCF procedures per current instructions.

Requirement.    The student Flight Engineer shall perform an "A" profile FCF IAW FRS Maintenance Ground run-up and Functional check-flight student guide and NFM.

Performance Standard.    Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite.    SFCF-1165.

FCF-1167      4.0      \*      R    1    KC-130      A      D

Goal.    Review FCF procedures.

Requirement.    The student Flight Engineer shall perform a Functional check-flight IAW FRS Maintenance Ground run-up and Functional check-flight student guide and NFM.

Performance Standard.    Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite.    SFCF-1166.

#### 7. Tactical Navigation (TN)

a. Purpose.    To introduce the student Flight Engineer to low level navigation.

b. Crew Requirements.    Shall be instructed/evaluated by a Flight Engineer Instructor.

c. Academic/Ground Training.    Low level flight planning and navigation procedures IAW the Tactical Navigation chapter of the KC-130 ANTP.

TN-1200      2.0      \*      1    KC-130      A      D

Goal.    Low level missions familiarization.

Requirement.    The student Flight Engineer shall demonstrate proper procedures during low level missions IAW FRS student guide.

Performance Standard.    Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite.    CK-1150.

External Syllabus Support.    Military Training Route.

#### 8. Formation (FORM)

a. Purpose.    To introduce the student Flight Engineer to basic section formation procedures.

b. Crew Requirements. Shall be instructed/evaluated by a Flight Engineer Instructor.

c. Academic/Ground Training. KC-130 ANTTP.

FORM-1300	2.0	*	2 KC-130	A	D
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Goal. Introduce formation procedures.

Requirement. The student Flight Engineer shall be familiar with formation flight procedures IAW KC-130 ANTTP.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual and KC-130 ANTTP.

Prerequisite. CK-1150.

External Syllabus Support. Special Use Airspace (SUAS).

#### 9. Air-to-Air Refueling (AAR)

a. Purpose. To introduce the student Flight Engineer to basic Air-to-Air Refueling (AAR) procedures.

b. General. Instructor Flight Engineer will induce emergencies and malfunctions as practical.

c. Crew Requirements. Shall be instructed/evaluated by a Flight Engineer Instructor. The minimum crew as defined by the NFM and ANTTP is required for flight events to include 1 observer per operated refueling pod.

d. Academic/Ground Training. Each flight requires 1 hour of classroom instruction.

(1) ATP-56B NATO Air-to-Air Refueling Manual

(2) In-flight refueling system.

(3) KC-130 ANTTP.

(4) AAR briefing using the Tactical Pocket Guide (TPG).

AAR-1600	3.0	*	1 KC-130	A	(N*)
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Goal. Train the student Flight Engineer in Fixed-Wing AAR (FWAAR) procedures.

Requirement. The student Flight Engineer shall be familiar with fixed-wing air-to-air refueling procedures including the transfer of fuel to receiver aircraft.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. CK-1150.



External Syllabus Support. Fixed-wing receiver aircraft and Special Use Airspace (SUAS).

AAR-1601      3.0      \*      1 KC-130      A      (N\*)

Goal. Refine fixed-wing air-to-air refueling missions.

Requirement. The student Flight Engineer shall demonstrate proper procedures including transfer of fuel to receiver aircraft and EMCON fixed-wing air-to-air refueling missions.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. AAR-1600.

External Syllabus Support. Fixed-wing receiver aircraft and Special Use Airspace (SUAS).

AAR-1602      3.0      \*      1 KC-130      A      (N\*)

Goal. Train the student Flight Engineer in Helicopter AAR (HAAR) procedures.

Requirement. The student Flight Engineer shall be familiar with helicopter refueling procedures including the transfer of fuel to receiver aircraft.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. CK-1150.

External Syllabus Support. Helicopter receiver aircraft and Special Use Airspace (SUAS).

408. CORE SKILL PHASE (2000)

1. General. The focus of Core Skill Phase is to train the Flight Engineer in duties essential to wartime employment. This includes: Night Systems (NS) operations, Long Range Navigation (LRN), Tactical Navigation (TN), Low Altitude Tactics (LAT), Formation (FORM), and IR Threat Reaction (TR).

a. Additional focus will be on crew resource management, aircraft preflight preparation, location and use of emergency equipment, ground and in-flight emergency procedures, aircraft post flight procedures, systems operation, system malfunctions, corrective actions, fault isolation and in-flight fault isolation.

b. Non-NSQ Flight Engineers under instruction shall be instructed by a Flight Engineer NSI when conducting NS Training. Non-NSQ syllabus initial events may be flown with an FEI/ANI/NI provided the instructor is proficient in the event being conducted.

c. The NSQ qualification syllabus consists of NS-2150, NS-2151, TN-2250, TN-2251 and requires 10 hours of total NVD time with at least 5 hours of Low Light Level (LLL) time. The initial 10 hours shall be flown in the aircraft.

Flight Engineers successfully completing these requirements may be issued a Night Systems Qualified letter by the squadron commanding officer.

d. Upon completion of each event, the FE-2 will be able to fly subsequent events in this phase without instruction with the exception of NSQ syllabus events.

e. Crew Resource Management shall be briefed for all flights and events.

## 2. Familiarization (FAM)

a. Purpose. Maintain Flight Engineer proficiency on administrative flights.

b. General. The Flight Engineer under instruction shall fly initial codes with a qualified FEI. Subsequent events may be flown with a qualified crew provided the Flight Engineer meets the pre-requisites.

c. Crew Requirements. Shall be instructed/evaluated by a Flight Engineer Instructor.

d. Academic/Ground Training. Each flight requires 1 hour of classroom instruction.

FAM-2000	2.0	90	R	1 KC-130	A/S	(N)
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Goal. Maintain proficiency in normal and emergency procedures during day or night flight operations.

Requirement. Review normal and emergency procedures during day flight operations per current instructions.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. NTPS-6116.

## 3. Night Systems (NS)

a. Purpose. To train the Flight Engineer in NS. The Flight Engineer will be capable of performing crew duties using NVDs during High Light Level (HLL) and Low Light Level (LLL) conditions.

b. General. The NSQ qualification syllabus consists of NS-2150, NS-2151, TN-2250, TN-2251 and requires 10 hours of total NVD time with at least 5 hours of Low Light Level (LLL) time. The initial 10 hours shall be flown in the aircraft. Flight Engineers successfully completing these requirements may be issued a Night Systems Qualified letter by the squadron commanding officer.

c. Crew Requirements. Shall be instructed by an NSI.

d. Academic/Ground Training. MAWTS-1 KC-130 NVD 1 and 2 Academic Support Package (ASP) courses and NITE lab.

NS-2150      2.0    365      R      1 KC-130   A    NS

Goal. Introduce the Flight Engineer to NVD operations under HLL conditions.

Requirement. Preflight shall include a flight station, cargo compartment and exterior lighting demonstration with NVDs. Instruct the Flight Engineer in the use of NVDs to include normal and emergency procedures at altitude and in the terminal environment. Emphasize NVD considerations, calibration, preflight, and in-flight normal and emergency procedures.

Performance Standard. Demonstrate the ability to properly pre-flight and don NVDs, diagnose NVD emergencies and apply corrective action, understand capabilities and limitations of NVDs under HLL conditions.

Prerequisite. FAM-2000.

NS-2151      2.0    180      R    1 KC-130   A    NS

Goal. Introduce Flight Engineer to NVD operations under LLL conditions.

Requirement. Instruct the Flight Engineer in the use of NVDs during LLL conditions to include normal and emergency procedures at altitude and in the terminal environment. Focus on the capabilities and limitations of the NVDs under LLL conditions, preflight, emergency procedures, calibration, preparation and in-flight use. The Flight Engineer will demonstrate knowledge of normal and emergency procedures outlined in the KC-130 ANTTP and NVD specific items in the MAWTS-1 NVD Fixed-Wing manual.

Performance Standard. The Flight Engineer shall demonstrate the ability to properly pre-flight and don NVDs, diagnose NVD emergencies and apply corrective action, understand capabilities and limitations of NVDs under LLL conditions.

Prerequisite. NS-2150.

#### 4. Long Range Navigation (LRN)

a. Purpose. Review long-range, over water navigation procedures and introduce the Flight Engineer to squadron SOPs concerning deployment operations.

b. General. Fly an extended over water flight and review over water procedures placing emphasis on mission planning, use of aircraft performance data, and engine/fuel logs.

c. Crew Requirements. Shall be instructed by a Flight Engineer Instructor.

d. Academic/Ground Training. Specific fuel panel procedures and NATOPS long range cruise considerations.

LRN-2160            8.0   365            R   1 KC-130   A/S   (N)

Goal.   Refine extended over water procedures.

Requirement.   Fly an extended over water flight and review over-water procedures placing emphasis on mission planning, use of aircraft performance data, and engine/fuel logs.

Performance Standard.   Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite.   FAM-2000.

5. Tactical Navigation (TN)

a. Purpose.   Train the Flight Engineer in low level procedures.

b. Crew Requirements.   Non-NSQ Flight Engineers under instruction shall be instructed by a Flight Engineer NSI when conducting NS Training. Non-NSQ syllabus initial events shall be flown with an FEI provided the instructor is proficient in the event being conducted.

c. Academic/Ground Training.   Utilize academic courseware as outlined in the MAWTS-1 Course Catalog and review MAWTS-1 ASPs, NFM and KC-130 ANTP.

TN-2200            2.0   365            R   1 KC-130   A   D

Goal.   Introduce the Flight Engineer to day low-level navigation procedures.

Requirement.   Fly a low level route per KC-130 ANTP procedures.

Performance Standard.   Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite.   FAM-2000.

External Syllabus Support.   Approved Military Training Route (MTR) or restricted area.

TN-2250            2.0   365            R   1 KC-130   A   NS

Goal.   Introduce the Flight Engineer to NVD low-level navigation under HLL.

Requirement.   Fly a night low level route per KC-130 ANTP procedures.

Performance Standard.   Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite.   NS-2150, TN-2200.

External Syllabus Support.   Approved Military Training Route (MTR) or restricted area.

TN-2251      2.0    180      R   1 KC-130   A   NS

Goal. Introduce the Flight Engineer to NVD low-level navigation under LLL.

Requirement. Fly a night low level route per KC-130 ANTPP procedures.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. NS-2151, TN-2250.

External Syllabus Support. Approved Military Training Route (MTR) or restricted area.

6. Low Altitude Tactics (LAT)

a. Purpose. To attain and maintain the Low Altitude Tactics Core Skill. Upon completion of this stage, the Flight Engineer will be capable of single ship low altitude ingress and egress to mission objective areas during the day.

b. General. General LAT rules of conduct (ROC) are contained in NAVMC 3500.14 and KC-130 specific LAT guidance is contained in the KC-130 ANTPP.

c. Crew Requirements. Shall be instructed by a FEI.

d. Academic/Ground Training. Review the low level navigation and LAT chapters of the KC-130 ANTPP.

LAT-2260      2.0    180      R   1 KC-130   A   D

Goal. Introduce and qualify the Flight Engineer, or to maintain proficiency for LAT in the duties associated with low altitude tactics flights in a low to medium ground threat environment.

Requirement. Emphasize cargo compartment preparation, crew briefing, lookout doctrine, scan for threats, crew coordination and combat entry/exit checklists. This event may include air-to-air refueling, air delivery or any type of air/land delivery.

Performance Standard. Per the applicable NATOPS flight manual and KC-130 ANTPP.

Prerequisite. TN-2200.

External Syllabus Support. LAT approved MTR or restricted area.

7. Formation (FORM)

a. Purpose. Train the Flight Engineer in formation procedures.

b. Crew Requirements. Non-NSQ Flight Engineers under instruction shall be instructed by a Flight Engineer NSI when conducting NS Training. Non-NSQ syllabus initial events may be flown with a FEI provided the instructor is proficient in the event being conducted.

c. Academic/Ground Training. The instructor and student shall review the KC-130 ANTTP Formation chapter.

FORM-2300        2.0    365        R   2 KC-130   A   (NS)

Goal. Proficiency training in formation procedures.

Requirement. Fly a two plane formation flight per the NATOPS and KC-130 ANTTP.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW NATOPS flight manual and KC-130 ANTTP.

Prerequisite. FAM-2000.

#### 8. Threat Reaction (TR)

a. Purpose. To attain and maintain the Core Skill Threat Reaction (IR) in a low to medium infrared (IR) threat environment. Upon completion of this stage, the Flight Engineer will be capable of flying in a ground infrared threat environment during day or night.

##### b. General

(1) The Flight Engineer shall be introduced to the KC-130T ASE suite and mission planning considerations for IR SAM defense. The sortie should focus on aircrew immediate action drills when confronted with threat systems from both front and rear aspects under varying mission profiles.

(2) Aircraft must have an operational ASE suite that supports infrared (IR) threat reaction.

(3) Ordnance must be expended on all initial events. Subsequent events can be simulated.

(4) Appropriate ground threat emitters should be available.

c. Crew Requirements. The Flight Engineer under instruction will be instructed by a FEI for all initial codes provided the instructor is proficient in the event.

d. Academic/Ground Training. Review the NFM, KC-130 ANTTP, Classified ANTTP, AFTTP 3-1 Threat Reference Guide. A WTI should administer the KC-130 ASE classes from the MAWTS-1 KC-130 Specific Academic Support Package.

TR-2400        2.0    365        R   1 KC-130   A/S   (NS)

Goal. Introduce the operational use of ASE and threat counter-tactics against small arms, AAA and IR SAM threat systems.

Requirement. Introduce the ASE counter measures dispensing system setup, missile warning system setup, jamming system, and threat reaction. The Flight Engineer should be exposed to a variety of threat situations of increasing intensity using both the Automatic and Manual modes of the dispensing system. Threat reaction maneuvering should include the take-off, cruise and approach phases of flight.

Performance Standard. The Flight Engineer should be able to correctly operate the aircraft's ASE suite in an IR SAM environment, and react timely and correctly to threat calls. Proper aircrew coordination shall be performed in threat reaction.

Prerequisite. TN-2260.

Ordnance. 120 flare expendables (required for initial event).

External Syllabus Support. Appropriate counter-measures range, a Smokey SAM crew with a minimum of 5 Smokey SAMs, MWS stimulator team if available.

#### 409. MISSION SKILL PHASE (3000)

1. General. The focus of the Mission Skill Phase is to train the Flight Engineer in the skills required to meet the Marine Corps Tasks (MCTs). These missions include: Assault Landing Zone (ALZ) operations, Air-to-Air Refueling (AAR), Rapid Ground Refueling (RGR), Air Delivery (AD), Direct Air Support Center (Airborne) (DASC(A)).

a. The FE under instruction shall receive the appropriate MAWTS-1 ASP lectures prior to the appropriate stage of training.

b. All instructors must be proficient in the events they instruct.

c. A Flight Engineer NSI is required only if the initial sortie is conducted using NVD's and the FE under instruction is not NSQ. A FEI who is NSQ may instruct a NSQ FE on initial events flown using NVD's. Any FEI may instruct these events during the day or unaided.

d. On completion of the required events contained in this phase, the Flight Engineer shall receive a Flight Engineer 1 NATOPS evaluation. The NATOPS check may be conducted any time after completion of the Mission Skill phase. Commanders shall not designate student Flight Engineers as an FE-1 until satisfactory completion of the entire 2000 and 3000 phases. Upon NATOPS FE-1 check completion, Flight Engineers shall log the NTPS-6117 tracking code and NTPS-6118 annual NATOPS check flight. All NATOPS checks shall be administered by a designated ANI/NI.

e. Crew Resource Management shall be briefed for all flights and events.

#### 2. Assault Landing Zone (ALZ)

a. Purpose. To attain and maintain the Mission Skill of operating from an ALZ. Upon completion of this stage, the Flight Engineer will be capable of day or night ALZ operations and will be knowledgeable of unimproved ground operation considerations.

b. General

(1) For the purposes of this training syllabus, ALZ operations are defined as terminal area operations from an airfield prepared with either day or night EAF markings as defined in the KC-130 ANTTP. Ideally, MMT will be utilized for terminal control with tactical NAVAIDS available.

(2) Emphasis in the unimproved environment is to introduce operating procedures designed to increase safety and reduce wear on the aircraft, footprint loading techniques, and airfield suitability services within the Marine Corps and DOD.

c. Crew Requirements. A Flight Engineer NSI is required only if the initial sortie is conducted using NVD's and the FE under instruction is not NSQ. A FEI who is NSQ may instruct a NSQ FE on initial events flown using NVD's. Any FEI may instruct these events during the day or unaided.

d. Academic/Ground Training. Review Assault Landing Zone operations in the KC-130 ANTTP. Review MAWTS-1 ASP ALZ courseware. Familiarize the Flight Engineer with ground emergencies in an austere environment and performance data for specific circumstances applicable pubs for unimproved runway operation.

ALZ-3500	2.0	365	R	1	KC-130	A	D
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Goal. Introduce Day ALZ procedures at improved/unimproved fields.

Requirement. Introduce maximum effort takeoffs and landings at improved/unimproved field IAW KC-130 ANTTP. Review all appropriate performance data.

Performance Standard. The Flight Engineer shall perform responsibilities/duties IAW the NATOPS flight manual.

Prerequisite. FAM-2000.

External Syllabus Support. Standard USMC ALZ day panel setup utilizing AMP-1, 2 or 3 markings. MMT or MWSS EAF personnel for terminal control, or USAF Special Tactics Team (SST).

ALZ-3550	2.0	365	R	1	KC-130	A	NS
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Goal. Introduce HLL NVD ALZ procedures.

Requirement. Introduce maximum effort takeoffs and landings in a high light level IAW KC-130 ANTTP. Review all appropriate performance data.

Performance Standard. The Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. NS-2150 and ALZ-3500.

External Syllabus Support. Standard USMC ALZ IR lighting utilizing AMP-1, 2 or 3 markings. MMT or MWSS EAF personnel for terminal control.



ALZ-3551      2.0   365      R   1 KC-130   A   NS

Goal.   Introduce LLL NVD ALZ procedures.

Requirement.   Introduce maximum effort takeoffs and landings in a low light level IAW KC-130 ANTTP.   Review all appropriate performance data.

Performance Standard.   The Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite.   NS-2151 and ALZ-3550.

External Syllabus Support.   Standard USMC ALZ IR lighting utilizing AMP-1, 2 or 3 markings.   MMT or MWSS EAF personnel for terminal control.

3.   Air-to-Air Refueling (AAR)

a.   Purpose.   To attain and maintain the Air-to-Air Refueling (AAR) Mission Skill.   Upon completion of this stage, the Flight Engineer will be capable of fixed wing, tilt rotor, and helicopter AAR operations in the day or night environment.

b.   General.   The FE shall conduct normal and emergency procedures associated with air-to-air refueling in addition to crew responsibilities in day, night and NVD procedures.

c.   Crew Requirements.   A Flight Engineer NSI is required only if the initial sortie is conducted using NVD's and the FE under instruction is not NSQ.   A FEI who is NSQ may instruct a NSQ FE on initial events flown using NVD's.   Any FEI may instruct these events during the day or unaided.

d.   Academic/Ground Training.   Review NATOPS Flight Manual, NATOPS flight manual supplements, ATP-56(B), KC-130 ANTTP, and MAWTS-1 Tactical AAR Courseware relating to fixed-wing AR procedures.

AAR-3600      3.0   365      R   1 KC-130   A   (N)

Goal.   FWAAR/TRAAR procedures.

Requirement.   This event can be flown in either day or night conditions with NVDs optional.   Conduct single tanker rendezvous procedures and receiver management.   Discuss emergency procedures related with AAR.   EMCON procedures should be introduced for the completion of the initial syllabus event.

Performance Standard.   Satisfactorily demonstrate the ability to maintain fuel state awareness and receiver management.   Additionally, demonstrate knowledge of normal and emergency procedures, and CRM outlined in the KC-130 NFM, ANTTP and ATP-56B.

Prerequisite.   FAM-2000.

External Syllabus Support. Fixed-wing or tilt rotor receiver aircraft.

AAR-3601      3.0    365      R   1 KC-130   A    D

Goal. Day Helicopter AAR (HAAR) procedures.

Requirement. This event shall be flown during the day. Fly a helicopter AAR mission and review normal and emergency helicopter refueling procedures per KC-130 ANTTP and ATP-56(B). Use of EMCON procedures is optional.

Performance Standard. Satisfactorily demonstrate the ability to maintain fuel planning awareness and receiver management. Additionally, demonstrate knowledge of normal and emergency procedures outlined in the NFM, ANTTP, and ATP-56B.

Prerequisite. FAM-2000.

External Syllabus Support. Helicopter receiver aircraft and special use airspace.

AAR-3650      3.0    365      R   1 KC-130   A    NS

Goal. NVD HAAR procedures.

Requirement. Conduct single tanker rendezvous procedures and receiver management. Fly a helicopter AAR mission and review normal and emergency helicopter refueling procedures at night per KC-130 ANTTP and ATP-56(B). Use of EMCON procedures is optional.

Performance Standard. Satisfactorily demonstrate the ability to maintain fuel planning awareness and receiver management. Additionally, demonstrate knowledge of normal and emergency procedures outlined in the NFM, ANTTP, and ATP-56B.

Prerequisite. AAR-3601, NS-2150 (HLL), NS-2151 (LLL).

External Syllabus Support. Helicopter receiver aircraft and special use airspace.

#### 4. Rapid Ground Refueling (RGR)

a. Purpose. To attain and maintain the Rapid Ground Refueling Mission Skill. Upon completion of this stage, the Flight Engineer will be capable of conducting rapid ground refueling of aircraft and ground vehicles in any environment, day or night.

b. Crew Requirements. A Flight Engineer NSI is required only if the initial sortie is conducted using NVD's and the FE under instruction is not NSQ. A FEI who is NSQ may instruct a NSQ FE on initial events flown using NVD's. Any FEI may instruct these events during the day or unaided.

c. Academic/Ground Training. The Flight Engineer should review the KC-130 ANTTP RGR chapter and the RGR class in the MAWTS-1 KC-130 Specific Academic Support Package.

RGR-3660      0.0    730      R   1 KC-130   A   (N)

Goal.    Train the FE in rapid ground refueling operations.

Requirement.    Instructor shall demonstrate briefing requirements for RGR operations. Introduce personnel qualifications, duties, responsibilities and RGR crew coordination. Introduce RGR equipment, site weapons and passenger considerations, site configurations and threat considerations. Introduce RGR fuel planning, site setup, operation, and breakdown procedures, and NVD considerations during RGR operations (optional). If aircraft cockpit lighting is NVD compatible, (NS) applies.

Performance Standard.    Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite.    FAM-2000.

External Syllabus Support.    Crash/Fire/Rescue Support.  
Receiver aircraft or ground vehicle (as appropriate).

5. Air Delivery (AD)

a. Purpose.    To attain and maintain the Mission Skill of AD. Upon completion of this stage, the Flight Engineer will be capable of planning and executing an AD of cargo or static line personnel, day or night.

b. General.    Initial AD event shall be actual drop of cargo, personnel or a combination. Subsequent updating of the event can be achieved by conducting a simulated drop.

c. Crew Requirements.    A Flight Engineer NSI is required only if the initial sortie is conducted using NVDs and the FE under instruction is not NSQ. A FEI who is NSQ may instruct a NSQ FE on initial events flown using NVDs. Any FEI may instruct these events during the day.

d. Academic/Ground Training.    Review KC-130 ANTPP Air Delivery chapter, KC-130 Tactical Pocket Guide, and MAWTS-1 KC-130 Specific Academic Support Package.

AD-3700      2.0    365      R   1 KC-130   A   D

Goal.    Train and evaluate the Flight Engineer in day air delivery procedures.

Requirement.    Review personnel, CDS, combination and HE air delivery procedures. The FE shall demonstrate the ability to ingress to an objective area and manage checklists for AD procedures. Emphasis should be placed on CRM and AD procedures.

Performance Standard.    Flight Engineer shall perform responsibilities/duties IAW the NATOPS flight manual and KC-130 ANTPP.

Prerequisite.    FAM-2000.

External Syllabus Support. AD unit of any service for cargo rigging and DZ control.

AD-3750            2.0    365            R   1 KC-130   A   NS

Goal. Train and evaluate the Flight Engineer in NS air delivery procedures.

Requirement. Review personnel, CDS, combination and HE air delivery procedures while on NVDs. The FE shall demonstrate the ability to ingress to an objective area and manage checklists for AD procedures. Emphasis should be placed on CRM and AD procedures.

Performance Standard. Flight Engineer shall perform responsibilities/duties IAW the NATOPS flight manual and KC-130 ANTPP.

Prerequisite. AD-3700, NS-2150 (HLL) or 2151 (LLL).

External Syllabus Support. AD unit of any service for cargo rigging and DZ control.

6. Direct Air Support Center Airborne (DASC(A))

a. Purpose. To attain and maintain the Mission Skill of DASC(A). Upon completion of this stage, the Flight Engineer will be capable of day or night DASC(A) operations.

b. General

(1) To train the FE in loading and trouble-shooting the DASC van to include its connectivity. DASC(A) is not limited to DASC van operations. The DASC(A) mission may include radio relay or any airborne communication suite that may support command and control.

(2) The FE shall conduct normal and emergency procedures associated with DASC operations in addition to crew responsibilities in day, night and NVD procedures.

c. Crew Requirements. A Flight Engineer NSI is required only if the initial sortie is conducted using NVDs and the FE under instruction is not NSQ. A FEI who is NSQ may instruct a NSQ FE on the initial event flown using NVDs. Any FEI may instruct this event during the day.

d. Academic/Ground Training. The Flight Engineer should review the KC-130 ANTPP and NATOPS flight manual regarding DASC(A) operations.

DASC 3800            2.0    \*            R   1 KC-130   A   (N)

Goal. Train the FE in loading and trouble-shooting the DASC van to include its connectivity. DASC(A) is not limited to DASC van operations. The DASC(A) mission may include radio relay or any airborne communication suite that may support command and control.

Requirement. Conduct DASC(A) to support the mission's command and control requirement.

Performance Standard. Flight Engineer shall perform responsibilities/duties IAW the KC-130 ANTTP and NATOPS flight manual.

Prerequisite. FAM-2000.

410. CORE PLUS SKILL PHASE (4000)

1. General. Upon completion of this phase of training, the Flight Engineer will be proficient in day and night RADAR Threat Reaction (TR), Air-to-Air Defensive Tactics (DT), advanced AD (combination, HALO/HAHO) and Battlefield Illumination (BI).

a. Upon completion of each stage in this phase, the FE-1 shall be able to fly subsequent events in the stage without instruction. For example: Once an FE-1 has completed DT-4411 he is now considered DT complete. The FE-1 is now qualified to fly all events in the DT stage without the aid of an instructor.

b. Crew Resource Management shall be briefed for all flights and events.

2. Threat Reaction (TR)

a. Purpose. To attain and maintain the Core Plus Skill of Threat Reaction (TR) in a RADAR threat environment. Upon completion of this phase, the Flight Engineer will be capable of flying in a ground RADAR threat environment during day or night.

b. General

(1) Aircraft must have an operational ASE suite that supports radio frequency (RF) threat reaction.

(2) Appropriate chaff shall be loaded prior to flight.

(3) Appropriate ground threat emitters shall be available.

c. Crew Requirements. Flight Engineer conducting training will be instructed by a FEI for all initial codes provided the Instructor is proficient in the event.

d. Academic/Ground Training. Review the NFM, KC-130 ANTTP, Classified ANTTP, AFTTP 3-1 Threat Reference Guide. A WTI should administer the KC-130 ASE classes from the MAWTS-1 KC-130 Specific Academic Support Package.

TR-4400            2.0    365            R   1 KC-130   A/S   (NS)

Goal. Introduce surface RADAR threat during a tactical mission profile.

Requirement. Conduct and train in RF Counter tactics. Introduce FE to pertinent ground loading procedures, system setup and operation of ASE systems in flight, emphasis on evasive flight techniques in coordination with ASE employment. Conduct defensive maneuvering against ground RF threat.

Emphasize briefing, conduct of flight, and lookout doctrine. IR threat reaction should also be practiced during this event.

Performance Standard. The FE shall demonstrate the ability to properly operate the ASE systems in flight, with an emphasis on evasive flight techniques in coordination with ASE employment. Conduct defensive maneuvering against RADAR acquisition, target tracking and launch sequences. The FE shall perform responsibilities/duties IAW the NATOPS flight manual and KC-130 ANTP.

Prerequisite. LAT-2260.

Ordinance. 160 chaff, 120 flares.

External Syllabus Support. Approved emitter range or restricted area with mobile emitters available. SUAS authorized for expendables.

### 3. Defensive Tactics (DT)

a. Purpose. To attain and maintain the Core Plus Skill of employing Defensive Tactics against an air threat by combining maneuver and use of the ASE suite.

b. General. The DT requirements consist of DT-4410. The following is recommended but not required:

(1) Use of the Rear Vision Device (RVD) and ASE suite.

(2) Appropriate chaff and decoy flares loaded prior to flight if available.

c. Crew Requirements. Flight Engineers receiving initial DT training shall be instructed by a DTI.

d. Academic/Ground Training. Review the KC-130 ANTP, Classified ANTP, and AFTP 3-1 Threat Reference Guide concerning air-to-air threats. Review the KC-130 ASE, DT, Stress & Performance Limitations and Threat Counter-tactics classes from the MAWTS-1 KC-130 Specific Academic Support Package.

DT-4410	2.0	365	R	1 KC-130, 1 Adversary	A	D
---------	-----	-----	---	-----------------------	---	---

Goal. Train in defensive maneuvering in relation to an air-to-air threat.

Requirement. The DTI shall brief and introduce DT briefing requirements. Practice defensive maneuvers with emphasis on hard turns, break turns, maneuvering velocity, one-circle/two-circle fights and negating tracking solutions. The flight preparation for this event shall include threat analysis, ASE and expendable integration with regard to the threat, and a detailed aircrew brief on threat reaction throughout all phases of an attack. CRM shall be emphasized to include incorporation of the RVD, aircrew lookout doctrine/scan sectors and threat call template. An event debrief with the aggressor pilot is recommended.

Performance Standard. The FE should demonstrate a working knowledge of A/A RADAR, A/A gun and IR missile defense and one-circle/two-circle considerations.

Prerequisite. LAT-2260, TR-4400.

Ordinance. 140 flares, 160 chaff.

External Syllabus Support. Aggressor aircraft and approved airspace. SUAS authorized for expendables.

#### 4. Air Delivery (AD)

a. Purpose. To attain and maintain the Core Plus Skill of Air Delivery (AD). Upon completion of this phase, the Flight Engineer will be capable executing HALO/HAHO AD.

b. Crew Requirements. Shall be instructed by a FEI or NSI (if NS).

c. Academic/Ground Training. Review KC-130 ANTPP Air Delivery chapter and KC-130 Tactical Pocket Guide. Review MAWTS-1 AD courseware and OPNAV 3710.7\_ altitude requirements.

AD-4700            2.0    365            R   1 KC-130   A    (N)

Goal. Introduce and qualify the Flight Engineer, or to maintain proficiency for the qualified Flight Engineer in the duties associated with high altitude environment air delivery.

Requirement. Plan and execute a Military Free Fall (MFF) AD operation. Perform mission analysis and planning of high altitude air delivery of personnel. Perform at least 1 HAHO or 1 HALO AD. Review applicable physiology and oxygen requirements for high altitude AD operations. Emphasize crew and jumpmaster coordination.

Performance Standard. Correctly identify the zone and safely perform an AD that lands within the drop zone safety criteria.

Prerequisite. AD-3700.

External Syllabus Support. Military free fall unit, appropriate DZ control and flight surgeon/physiologist if applicable.

#### 5. Battlefield Illumination (BI)

a. Purpose. To attain and maintain the Mission Plus Skill of Battlefield Illumination (BI). Upon completion of this phase, the Flight Engineer will be capable of executing BI.

b. Crew Requirements. Shall be instructed by a FEI.

c. Academic/Ground Training. Utilize academic courseware as outlined in the MAWTS-1 course catalog and review MAWTS-1 ASPs, NFM, and KC-130 ANTPP.

BI-4710            2.0    \*            R 1 KC-130   A   N

Goal. Introduce and qualify the Flight Engineer, or to maintain proficiency for the qualified Flight Engineer in the duties and procedures associated with Battlefield Illumination.

Requirement. Emphasize cargo compartment preparation, crew briefing, crew coordination and combat entry/exit checklists. An actual expenditure of ordnance is required.

Performance Standard. Per the applicable NATOPS flight manual and KC-130 ANTP.

Prerequisite. AD-3700.

Ordnance. 15 LUU-2A/B, B/B or LUU-19 flares as required.

External Syllabus Support. SUAS authorized for aircraft parachute flares and illumination.

411. INSTRUCTOR TRAINING PHASE (5000)

1. General. The purpose of this phase of training is to train qualified Flight Engineers to instruct various levels of instruction.

a. Flight Engineers shall be recommended for instructor training via Aircrew Performance Review Board (APRB). Upon recommendation, the Flight Engineer shall complete appropriate syllabus requirements. Upon completion of syllabus requirements, the commanding officer may designate the Flight Engineer as an instructor.

b. Standardization will be emphasized throughout instructor training.

c. Crew Resource Management shall be briefed for all flights and events.

2. Flight Engineer Instructor (FEI)

a. Purpose. To develop qualified Flight Engineer Instructors (FEI) using a standardized instructor training program. This syllabus is designed to prepare Flight Engineer to instruct the majority of events within the Core Skill Introduction, Core Skill, Mission Skill, and Mission Plus Skill Phases. This portion of the syllabus shall be used by VMGR squadrons to assist in instructor standardization.

b. General

(1) Emphasize standardization and the ability of the Flight Engineer to instruct normal and emergency procedures per the NATOPS Flight Manual.

(2) 1000 flight hours are required as a qualified Flight Engineer to begin this instructor stage.

(3) Upon successful completion of FEI-5107, the Flight Engineer shall be evaluated in flight for qualification (FEI-5108) to receive the designation as an FEI.



c. Crew Requirements. Shall be instructed by an ANI.

SFEI-5100      4.0      \*              E   CPT/OFT      S      D

Goal. Familiarize the Instructor Under Training (IUT) in the proper operation of the device trainers.

Requirement. Instruct IUT on proper set-up and safe operation of device trainer.

Performance Standard. IUT Flight Engineer shall perform responsibilities/duties IAW the NATOPS flight manual.

Prerequisite. NTPS-6117 and NTPS-6118.

SFEI-5101      4.0      \*              E   CPT/OFT      S      D

Goal. Refine device operation.

Requirement. Review SFEI-5100; IUT will demonstrate proper device operation per current instruction.

Performance Standard. IUT Flight Engineer shall perform responsibilities/duties IAW the NATOPS flight manual.

Prerequisite. SFEI-5100.

SFEI-5102      4.0      \*              E   CPT/OFT      S      D

Goal. Refine device operation and instructional techniques.

Requirement. Review SFEI-5101; combine device operations with instructional techniques. The IUT shall demonstrate the ability to correct student deficiencies and display appropriate subject matter expertise.

Performance Standard. IUT Flight Engineer shall perform responsibilities/duties IAW the NATOPS flight manual.

Prerequisite. SFEI-5101.

SFEI-5103      4.0      \*              E   CPT/OFT      S      D

Goal. Refine device operation and instructional techniques.

Requirement. Review SFEI-5102. The IUT shall demonstrate the ability to correct student deficiencies and display appropriate subject matter expertise.

Performance Standard. IUT Flight Engineer shall perform responsibilities/duties IAW the NATOPS flight manual.

Prerequisite. SFEI-5102

SFEI-5104      4.0    \*            E   CPT/OFT    S    D

Goal.    Qualification to operate the device trainer effectively.

Requirement.    IUT must demonstrate proper device operation combining instructional technique.

Performance Standard.    IUT Flight Engineer shall perform responsibilities/duties IAW the NATOPS flight manual.  
Prerequisite.    SFEI-5103.

FEI-5105      4.0    \*            E   1 KC-130    A    (N)

Goal.    Refinement of IUT aircraft instructional techniques.

Requirement.    IUT must demonstrate proper instructional technique. The IUT shall demonstrate the ability to correct student deficiencies and display appropriate subject matter expertise.

Performance Standard.    IUT Flight Engineer shall perform responsibilities/duties IAW the NATOPS flight manual.

Prerequisite.    SFEI-5104.

FEI-5106      4.0    \*            E   1 KC-130    A    (N)

Goal.    Refinement of IUT aircraft instructional techniques.

Requirement.    IUT must demonstrate proper instructional technique. The IUT shall demonstrate the ability to correct student deficiencies and display appropriate subject matter expertise.

Performance Standard.    IUT Flight Engineer shall perform responsibilities/duties IAW the NATOPS flight manual.

Prerequisite.    FEI-5105.

FEI-5107      4.0    \*            E   1 KC-130    A    (N)

Goal.    Refinement of IUT aircraft instructional techniques.

Requirement.    IUT must demonstrate proper instructional technique. The IUT shall demonstrate the ability to correct student deficiencies and display appropriate subject matter expertise.

Performance Standard.    IUT Flight Engineer shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite.    FEI-5106.

FEI-5108      4.0    \*            R   E   1 KC-130    A    (N)

Goal.    Flight Engineer Instructor Designation.

Requirement. This event shall be flown in conjunction with either an AAR, AD, TN, ALZ, RGR, or combination mission event with the IUT instructing a Flight Engineer under the supervision of a NATOPS Instructor. The IUT shall demonstrate the ability to correct student deficiencies and display appropriate subject matter expertise. Upon completion of this event, the IUT may be designated a FEI by the squadron commanding officer.

Performance Standard. The IUT shall demonstrate the ability to correct student deficiencies and display appropriate subject matter expertise. Flight Engineer under instruction shall perform responsibilities/duties IAW NFM, KC-130 ANTP, 3710.7\_, 4790.2\_ and associated MIMS.

Prerequisite. FEI-5107.

3. NATOPS Instructor/Assistant NATOPS Instructor (NI/ANI)

a. Purpose. Qualify IUT as a NATOPS Instructor/Assistant NATOPS Instructor (NI/ANI).

b. General. The purpose of this stage is to qualify the IUT as a NATOPS Instructor. The Flight Engineer IUT shall have 1500 flight hours as a qualified Flight Engineer. The ANI/NI/GNE primarily conducts annual NATOPS evaluations. The NE/NI/ANI primarily conducts annual NATOPS evaluations. The ANI/NI/GNE IUT shall be instructed on proper check-ride preparation, in-flight supervision of the aircraft, and Flight Engineer/Flight Mechanic post-flight administrative requirements. Upon completion of the ANI/NI/GNE syllabus, the Flight Engineer may be designated an ANI or NI by the squadron commanding officer or designated the Group NATOPS Evaluator (GNE) by the group commanding officer.

c. Crew Requirements. An ANI IUT (NI-5140) shall be instructed by the NI, GNE, or Model Manager. A NI IUT (NI-5140) shall be instructed by the GNE or Model Manager. A GNE IUT (NI-5141) shall be instructed by the Model Manager.

d. Academic/Ground Training. The IUT shall be familiar with all applicable OPNAV and NATOPS directives, with an emphasis on NATOPS normal and emergency procedures.

NI-5140            3.0    365            R   E   1   KC-130    A    (N)

Goal. NI/ANI training and designation.

Requirement. The NATOPS Instructor/Evaluator will evaluate Flight Engineer per NATOPS procedures. RON flight is preferred. Should be either AAR, AD, TN, ALZ, RGR, or combination mission.

Performance Standard. The Flight Engineer IUT shall perform responsibilities/duties IAW the NATOPS flight manual, KC-130 ANTP, 3710.7\_, 4790.2\_ and associated MIMS.

Prerequisite. NSQ (NS-2150, NS-2151) and FEI-5108, 1500 flight hours as a qualified Flight Engineer.

NI-5141            3.0    365            R   E   1 KC-130    A   (N)

Goal.   NATOPS Evaluator designation.

Requirement.   The Model Manager will evaluate Flight Engineer per NATOPS procedures.   RON flight is preferred.   Should be either AAR, AD, TN, ALZ, RGR, or combination mission.

Performance Standard.   Flight Engineer IUT shall perform responsibilities/duties IAW the NATOPS flight manual, KC-130 ANTP, 3710.7\_, 4790.2\_ and associated MIMS.

Prerequisite.   NI-5140.

#### 4.   Night Systems Instructor (NSI)

a.   Purpose.   To certify a KC-130T Flight Engineer as an instructor capable of safely conducting ground and airborne instruction of the KC-130 Night Systems syllabus.

b.   General.   Refer to NAVMC 3500.14, MCO 3500.109 and the MAWTS-1 course catalog.   The build-up phase may be developed and supervised by the Squadron NSI.   Upon certification by MAWTS-1, the NSI may be designated by the squadron commanding officer.

c.   Crew requirements.   Refer to the MAWTS-1 KC-130 Course Catalog.

d.   Academic/Ground Training.   Refer to the MAWTS-1 KC-130 Course Catalog.

NSI-5150            2.0                    R   E                    1 KC-130    A   NS

Requirement.   Reference the MAWTS-1 KC-130 Course Catalogue for the NSI POI.

NSI-5151            2.0                    R   E                    1 KC-130    A   NS

Requirement.   Reference the MAWTS-1 KC-130 Course Catalogue for the NSI POI.

NSI-5152            2.0                    R   E                    2 KC-130    A   NS

Requirement.   Reference the MAWTS-1 KC-130 Course Catalogue for the NSI POI.

NSI-5153            2.0                    R   E                    1 KC-130    A   NS

Requirement.   Reference the MAWTS-1 KC-130 Course Catalogue for the NSI POI.

#### 5.   Weapons and Tactics Instructor (WTI)

a.   Purpose.   Develop highly qualified Flight Engineers into effective unit tactics instructors and expose them to current Marine Corps tactical doctrine.   Additionally, this stage is designed to increase knowledge and experience of the capabilities and associated tasks of the KC-130.

b. General. Tactics and techniques will be taught per the KC-130 ANTPP and the MAWTS-1 supplements. Only MAWTS-1 instructors shall instruct/qualify flights in this stage. Qualification shall only be achieved as shown in the WTI Course Catalog. Upon certification by MAWTS-1, the WTI may be designated by the squadron commanding officer.

c. Crew requirements. Refer to the MAWTS-1 WTI Course Catalog.

d. Academic/Ground Training. Refer to the MAWTS-1 WTI Course Catalog.

WTI-5999           \*       \*                   E   KC-130   A

Requirement. Reference the MAWTS-1 KC-130 Course Catalog.

412. REQUIREMENTS, QUALIFICATIONS, DESIGNATIONS (RQD) PHASE (6000)

1. General. To provide a vehicle for tracking codes associated with certifications, qualifications and designations. E-coded sorties are evaluation sorties. Once the flight to attain the qualification/designation is complete, a letter from the squadron commanding officer awarding the qualification/designation shall be placed in the NATOPS jacket before that qualification/designation can be utilized.

2. Engine Run Designation

a. Purpose. Engine Run designation.

b. General. Designate the Flight Engineer in engine run procedures. This stage does not require flight time, but does require the use of a KC-130 aircraft for the indicated time.

c. Crew Requirements. RQD-6100 shall be instructed/evaluated by a Flight Engineer ANI.

d. Academic/Ground Training. IAW NATOPS flight manual, 3710.7\_ and local course rules.

RQD-6100           1.0       \*                   R   E   1   KC-130   A   (N)

Goal. Evaluate Flight Engineer on engine run procedures.

Requirement. A Flight Engineer ANI will evaluate the Flight Engineer IUT high/low power engine run procedures.

Performance Standard. Qualified per MIMS, NATOPS flight manual, and local course rules.

Prerequisite. NTPS-6116.

3. Right Seat Taxi Observer Designation

a. Purpose. To train the Flight Engineer in right seat taxi observer procedures. This stage does not require flight time, but does require the use of the KC-130T Aircraft for the indicated time.

b. General. A Basic Instructor Pilot or Flight Engineer ANI may instruct the Flight Engineer for the right seat taxi observer syllabus.

c. Crew Requirements. RQD-6101 shall be evaluated by a Basic Instructor Pilot or Flight Engineer ANI and a qualified taxi pilot.

d. Academic/Ground Training. IAW NATOPS Flight Manual, 3710.7\_ and local course rules.

RQD-6101        1.0    \*            R   E   1   KC-130    A    (N)

Goal. Evaluate Flight Engineer on right seat taxi observer procedures.

Requirement. A Basic Instructor Pilot or Flight Engineer ANI will evaluate the Flight Engineer in right seat taxi observer procedures.

Performance Standard. Qualified per MIMS, NATOPS flight manual, and local course rules.

Prerequisite. NTPS-6116.

4. Post Maintenance Functional Check Flight (FCF)

a. Purpose. Functional Check Flight designation.

b. General. Within this stage of training the Flight Engineer will fly a functional check flight on applicable flight profiles and associated checks IAW check flight conditions, to include a review of normal and emergency procedures during an A, B, C, or D FCF profile. Ensure proficiency in functional check flight procedures.

c. Crew Requirements. RQD-6100 shall be instructed/evaluated by a Flight Engineer ANI.

d. Academic/Ground Training. NFM FCF Procedures.

FCF-6106        2.0    365            R   1   KC-130    A    D

Goal. Qualify and maintain proficiency for Flight Engineers in functional check flight procedures.

Requirement. Conduct an engine run and flight phase inspection upon completion of post maintenance discrepancies. The flight shall include the shutdown and air-start of at least one engine.

Performance Standard. Satisfactorily execute procedures per the NFM, OPNAVINST 3710.7\_, and OPNAVINST 4790.2 .

Prerequisite. NTPS-6116.

5. KC-130T NATOPS Evaluation POI

a. Purpose. To evaluate the Flight Engineer's knowledge of aircraft systems, performance limitations, emergency procedures, and flight and ground operations.

b. General

(1) NATOPS Instructors shall conduct the NATOPS evaluation in accordance with OPNAVINST 3710.7 series and other applicable directives, instructions, and orders.

(2) The NATOPS Instructor shall utilize the NATOPS Model Manager generated NATOPS Aviation Training Form (ATF) and the evaluation metrics required for the accomplishment and performance of the standardized criterion to determine whether the Flight Engineer completed the sortie. Prior to the oral examination, the NATOPS Instructor shall review the NATOPS monthly emergency procedures examinations for the previous twelve (12) months and previous NATOPS evaluations. At the discretion of the squadron commanding officer, a letter designating the Flight Engineer as NATOPS qualified shall be placed in the NATOPS jacket.

(3) NATOPS Evaluatees shall complete and have a graded open book, closed book, and oral examination prior to the commencement of the actual NATOPS evaluation event.

(4) The Flight Engineer under instruction shall be designated the appropriate level of qualification. A FE-2 is considered systems qualified but requires supervision by a Flight Engineer Instructor until successful completion of applicable phase of training.

(5) Once the FE-1 has successfully completed NTPS-6117, he should also log the NTPS-6118 code. Annual FE-1 NATOPS evaluations thereafter only require the logging of the NTPS-6118 code.

(6) A FE-1 may also instruct training for 2000 & 3000 Phase Flight Mechanic codes.

c. Crew Requirements. Shall be instructed/evaluated by a Flight Engineer Assistant NATOPS Instructor.

NTPS-6010      3.0    365      R    E    Open Book NATOPS Examination

Goal. The open book examination shall consist of, but not be limited to the question bank. The purpose of the open book examination is to evaluate the Flight Engineer's knowledge of the appropriate publications and the aircraft.

Performance Standard. Achieve a minimum score of 3.5 on the open book examination.

NTPS-6011      1.0    365      R    E    Closed Book NATOPS Examination

Goal. The purpose of the closed book examination is to evaluate the Flight Engineer's knowledge of the concerning normal/emergency procedures and aircraft limitations.

Performance Standard. Achieve a minimum score of 3.3 on the closed book examination.

NTPS-6012      3.0    365      R    E    Oral NATOPS Examination

Goal. The oral examination shall consist of, but not be limited to the question bank. The instructor may draw upon their experience to propose questions of a direct and positive manner and in no way be opinionated to evaluate the Flight Engineer's knowledge of the concerning normal/emergency procedures, aircraft limitations, and performance.

Performance Standard. Achieve a minimum grade of qualified on the oral examination.

NTPS-6116      4.0    365      R    E    1 KC-130    A    (N)

Goal. FE-2 NATOPS evaluation.

Requirement. A NATOPS Instructor will evaluate the student Flight Engineer per NATOPS. Remain overnight (RON) flight is preferred.

Performance Standard. Student Flight Engineer shall perform responsibilities/duties IAW the NATOPS flight manual, 3710.7\_, 4790.2\_ and associated MIMS.

Prerequisite. NTPS-6010, NTPS-6011, NTPS-6012, Core Skill Introduction Phase complete.

NTPS-6117      4.0    \*      R    E    1 KC-130    A    (N)

Goal. FE-1 NATOPS initial evaluation.

Requirement. A NATOPS Instructor will evaluate the Flight Engineer per NATOPS. Remain overnight (RON) flight is preferred. The NATOPS evaluation should be either an AAR, AD, TN, ALZ, RGR, or combination mission. RON flight is preferred.

Performance Standard. Flight Engineer under instruction shall perform responsibilities/duties IAW the NATOPS flight manual, KC-130 ANTPP, 3710.7\_, 4790.2\_ and associated MIMS. The FE-1 Flight Engineer will have the ability to instruct 2000 phase Flight Mechanic initial codes upon completion of RQD-6117.

Prerequisite. NTPS-6010, NTPS-6011, NTPS-6012, NTPS-6116, Core Skill and Mission Skill Phase complete.

NTPS-6118      4.0    365      R    E    1 KC-130    A    (N)

Goal. Annual FE-1 NATOPS evaluation.

Requirement. A NATOPS Instructor will evaluate the Flight Engineer per NATOPS. RON flight is preferred. The NATOPS evaluation should be either an AAR, AD, TN, ALZ, RGR, or combination mission.

Performance Standard. Flight Engineer under evaluation shall perform responsibilities/duties IAW the NATOPS flight manual, KC-130 ANTPP, 3710.7\_, 4790.2\_ and associated MIMS.



Prerequisite. NTPS-6010, NTPS-6011, NTPS-6012, NTPS-6116,  
NTPS-6117.

413. T&R SYLLABUS MATRIX

KC-130T FLIGHT ENGINEER														
1000 CORE SKILL INTRODUCTION PHASE														
STAGE	TRNG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
FAMILIARIZATION (FAM)														
SFAM	1000		2.0	*			S					INTRO		100
SFAM	1001		2.0	*			S				1000	INTRO		101
SFAM	1002		2.0	*			S				1001	START MALF		102
SFAM	1003		2.0	*			S				1002	EMERG MALF		103
SFAM	1004		2.0	*	R	E	S				1003	PERF CHECK		104
SFAM	1005		2.0	*	R		S				1004	ENG SYS		105
SFAM	1006		2.0	*	R		S				1005	PROP SYS		106
SFAM	1007		2.0	*	R		S				1006	ELEC SYS		107
SFAM	1008		2.0	*	R		S				1007	PNEU SYS		108
SFAM	1009		2.0	*	R		S				1008	FUEL SYS		109
SFAM	1010		2.0	*	R		S				1009	HYD SYS		110
SFAM	1011		2.0	*	R		S				1010	A/C SYS		111
SFAM	1012		2.0	*	R		S				1011	COMM/NAV		112
SFAM	1013		2.0	*	R		S				1012	AAR SYS		113
SFAM	1014		2.0	*	R		S				1013	SIM EVAL		114
FAM	1100	4.0		*	R		A	1		(N)	1014	TURN AROUND		115
FAM	1101	4.0		*	R		A	1		(N)	1100	TOLD		116
FAM	1102	4.0		*	R		A	1		(N)	1101	W&B		117
FAM	1103	4.0		*	R		A	1		(N)	1102	AW OPS		118
FAM	1104	4.0		*	R		A	1		(N)	1103	ENG OUT		119
FAM	1105	4.0		*	R		A	1		(N)	1104	OW OPS		120
		24.0	30.0											
SYSTEMS REVIEW (REV)														
REV	1130	4.0		*			A	1		D	1105	ENG APU		130
REV	1131	4.0		*			A	1		D	1130	ENG SYS		131
REV	1132	4.0		*			A	1		D	1131	PROPS		132
REV	1133	4.0		*			A	1		D	1132	AC ELEC		133
REV	1134	4.0		*			A	1		D	1133	DC ELEC		134
REV	1135	4.0		*			A	1		D	1134	PNEUMATICS		135
REV	1136	4.0		*			A	1		D	1135	A/C PRESS		136
REV	1137	4.0		*			A	1		D	1136	FUEL		137
REV	1138	4.0		*			A	1		D	1137	UTIL HYD		138
REV	1139	4.0		*			A	1		D	1138	BOOST/AUX		139
REV	1140	4.0		*			A	1		D	1139	COMM		140
REV	1141	4.0		*			A	1		D	1140	NAV FLT SYS		141
REV	1142	4.0		*			A	1		D	1141	AAR SYS		142
		52.0												
INTERMEDIATE PROGRESS EVALUATION (CK)														
CK	1150	4.0		*		E	A	1		(N)	1142	INTERMED CK		150
		4.0												

KC-130T FLIGHT ENGINEER														
1000 CORE SKILL INTRODUCTION PHASE (CONT)														
STAGE	TRNG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
MAINTENANCE GROUND RUNS (MGR)														
SMGR	1160		3.0	*			S/A			D	1150	INTRO RUNUP		160
SMGR	1161		3.0	*			S/A			D	1160	REFN RUNUP		161
MGR	1162	4.0		*	R		A	1		D	1161	REFN RUNUP		164
MGR	1163	4.0		*			A	1		D	1162	REFN RUNUP		
MGR	1164	4.0		*			A	1		D	1163	RUNUP CHECK		166
		12	6.0											
FUNCTIONAL CHECK FLIGHTS (FCF)														
SFCF	1165		4.0	*			S/A			D	1164	INTRO FCF		162
SFCF	1166		4.0	*			S/A			D	1165	REFN FCF		163
FCF	1167	4.0		*	R		A	1		D	1166	FCF REVIEW		167
		4.0	8.0											
TACTICAL NAVIGATION (TN)														
TN	1200	2.0		*			A	1		D	1150	TACNAV		173
		2.0												
FORMATION (FORM)														
FORM	1300	2.0		*			A	2		D	1150	FORMATION		174
		2.0												
AIR-TO-AIR REFUELING (AAR)														
AAR	1600	3.0		*			A	1		(N*)	1150	FWAAR PROC		170
AAR	1601	3.0		*			A	1		(N*)	1600	FWAAR PROC		171
AAR	1602	3.0		*			A	1		(N*)	1150	HAAR PROC		172
		9.0												
PHASE TOTALS														
		113	44.0											

KC-130T FLIGHT ENGINEER														
2000 CORE SKILL PHASE														
STAGE	TENG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
FAM														
FAM	2000	2.0		90	R		A/S	1		(N)	6116	FAM		200
		2.0												
NIGHT SYSTEMS (NS)														
NS	2150	2.0		365	R		A	1		NS	2000	HLLFAM	2000	204
NS	2151	2.0		180	R		A	1		NS	2150	LLL FAM	2150,2000	205
		4.0												
LONG RANGE NAVIGATION (LRN)														
LRN	2160	8.0		365	R		A/S	1		(N)	2000	LRNAV	2000	250
		8.0												
TACTICAL NAVIGATION (TN)														
TN	2200	2.0		365	R		A	1		D	2000	DAY TN	2000	220
TN	2250	2.0		365	R		A	1		NS	2150, 2200	HLL TN	2000,2150 2200	223
TN	2251	2.0		180	R		A	1		NS	2151, 2250	LLL TN	2200,2250 2151,2150 2000	224
		6.0												
LOW ALTITUDE TACTICS (LAT)														
LAT	2260	2.0		180	R		A	1		D	2200	LAT	2000,2200	321
		2.0												
FORMATION (FORM)														
FORM	2300	2.0		365	R		A	2		(NS)	2000	FORM	2000	331
		2.0												
THREAT REACTION (TR)														
TR	2400	2.0		365	R		A/S	1		(NS)	2260	IR TR	2000	361
		2.0												
PHASE TOTALS														
		26.0												

KC-130T FLIGHT ENGINEER														
3000 MISSION SKILL PHASE														
STAGE	TRNG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
ASSAULT LANDING ZONE (ALZ)														
ALZ	3500	2.0		365	R		A	1		D	2000	DAY ALZ	2000	271
ALZ	3550	2.0		365	R		A	1		NS	2150 3500	HLL ALZ	2000,2150 3500	272
ALZ	3551	2.0		365	R		A	1		NS	3550 2151	LLL ALZ	2000,2150, 2151,3500, 3550	273
		6.0												
AIR-TO-AIR REFUELING (AAR)														
AAR	3600	3.0		365	R		A	1		(N)	2000	FWAAR/ TRAAR	2000	210
AAR	3601	3.0		365	R		A	1		D	2000	DAY HAAR	2000	212
AAR	3650	3.0		365	R		A	1		NS	3601, (2150 HLL), (2151 LLL)	NVD HAAR	3601,2000, (2150HLL) (2151LLL)	213
		9.0												
RAPID GROUND REFUELING (RGR)														
RGR	3660	0.0		730	R		A	1		(N)	2000	RAPID GROUND REFUEL	2000, (2150HLL) (2151LLL)	274
		0.0												
AIR DELIVERY (AD)														
AD	3700	2.0		365	R		A	1		D	2000	DAY AD	2000	241
AD	3750	2.0		365	R		A	1		NS	3700, (2150 HLL), (2151 LLL)	NS AD	3700,2000, (2150HLL) (2151LLL)	242
		2.0												
DIRECT AIR SUPPORT CENTER AIRBORNE (DASC)														
DASC	3800	2.0		*	R		A	1		(N)	2000	DASC	2000, (2150HLL) (2151LLL)	
		2.0												
PHASE TOTALS														
		19.0												

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KC-130T FLIGHT ENGINEER														
4000 CORE PLUS SKILLS PHASE														
STAGE	TRNG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
THREAT REACTION (TR)														
TR	4400	2.0		365	R		A/S	1		(NS)	2260	RF TR	2000	360
		2.0												
DEFENSIVE TACTICS (DT)														
DT	4410	2.0		365	R		A	1		D	2260, 4400	DT	2000, 2200, 2260	461
		2.0												
AIR DELIVERY (AD)														
AD	4700	2.0		365	R		A	1		(N)	3700	HALO, HAHO	2000, (2150HLL) (2151LLL)	442
		2.0												
BATTLEFIELD ILLUMINATION (BI)														
BI	4710	2.0		*	R		A	1		N	3700	BI	2000, 3700 (2150HLL) (2151LLL) (3750 IF NS)	444
		2.0												
PHASE TOTALS														
		8.0												

KC-130T FLIGHT ENGINEER														
5000 INSTRUCTOR TRAINING PHASE														
STAGE	TRNG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
FLIGHT ENGINEER INSTRUCTOR (FEI)														
SFEI	5100		4.0	*		E	S			D	6117 6118	INTRO SIM OPS		500
SFEI	5101		4.0	*		E	S			D	5100	REFINE SIM OPS		501
SFEI	5102		4.0	*		E	S			D	5101	REFINE SIM OPS		502
SFEI	5103		4.0	*		E	S			D	5102	REFINE SIM OPS		503
SFEI	5104		4.0	*		E	S			D	5103	SIM QUAL		504
FEI	5105	4.0		*		E	A	1		(N)	5104	IUT BUILD UP		
FEI	5106	4.0		*		E	A	1		(N)	5105	IUT BUILD UP		
FEI	5107	4.0		*		E	A	1		(N)	5106	IUT BUILD UP		
FEI	5108	4.0		*	R	E	A	1		(N)	5107	FEI CK		690
		16.0	20.0											
NATOPS INSTRUCTOR (ANI/NI/NE)														
NI	5140	3.0		365	R	E	A	1		(N)	2150 2151 5108	ASST NTPS INSTR (ANI)	2000	683
NI	5141	3.0		365	R	E	A	1		(N)	5140	NATOPS INST (NI/GNE)	2000	684
		6.0												
NIGHT SYSTEMS INSTRUCTOR (NSI)														
NSI	5150	2.0		*	R	E	A	1		NS		NS FAM	2000, (2150HLL), (2151LLL)	510
NSI	5151	2.0		*	R	E	A	1		NS		NS LL	2000, (2150HLL), (2151LLL)	511
NSI	5152	2.0		*	R	E	A	1		NS		NS AD	2000, (2150HLL), (2151LLL)	512
NSI	5153	2.0		*	R	E	A	1		NS		NSI CHECK	2000, (2150HLL), (2151LLL)	691
		8.0												
WEAPONS TACTICS INSTRUCTOR (WTI)														
WTI	5999	*		*								MAWTS-1		692
		0.0												
PHASE TOTALS														
		30.0	20.0											

KC-130T FLIGHT ENGINEER														
6000 REQUIREMENTS / QUALIFICATIONS / DESIGNATIONS PHASE														
STAGE	TRNG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
ENGINE RUN														
RQD	6100	1.0		*	R	E	A	1		(N)	6116	HIGH/LOW PWR R/U		600
RQD	6101	1.0		*	R	E	A	1		(N)	6116	TAXI OBS		601
		2.0												
POST MAINTENANCE FUNCTIONAL CHECK FLIGHT (FCF)														
FCF	6106	2.0		365	R		A	1		D	6116	FCF CK	2000	602
		2.0												
NATOPS (NTPS)														
NTPS	6010			365	R	E						OPEN BK		
NTPS	6011			365	R	E						CLSD BK		
NTPS	6012			365	R	E						ORAL EX		
NTPS	6116	4.0		365	R	E	A	1		(N)	1000 PHASE COMPLETE, 6010,6011, 6012	FE-2 CK & DESIG		680
NTPS	6117	4.0		*	R	E	A	1		(N)	2000/3000 PHASE COM, 6010,6011, 6012,6116	FE-1 CK & DESIG	2000, 6116	681
NTPS	6118	4.0		365	R	E	A	1		(N)	6010,6011, 6012,6116, 6117	ANNUAL NATOPS	2000, 6116, 6117	682
		12.0												
PHASE TOTALS														
		18.0												

414. SYLLABUS EVALUATION FORMS. Contact MAWTS-1 to receive FE T&R syllabus evaluation forms.



CHAPTER 5

KC-130T FLIGHT MECHANIC (MOS 6276)

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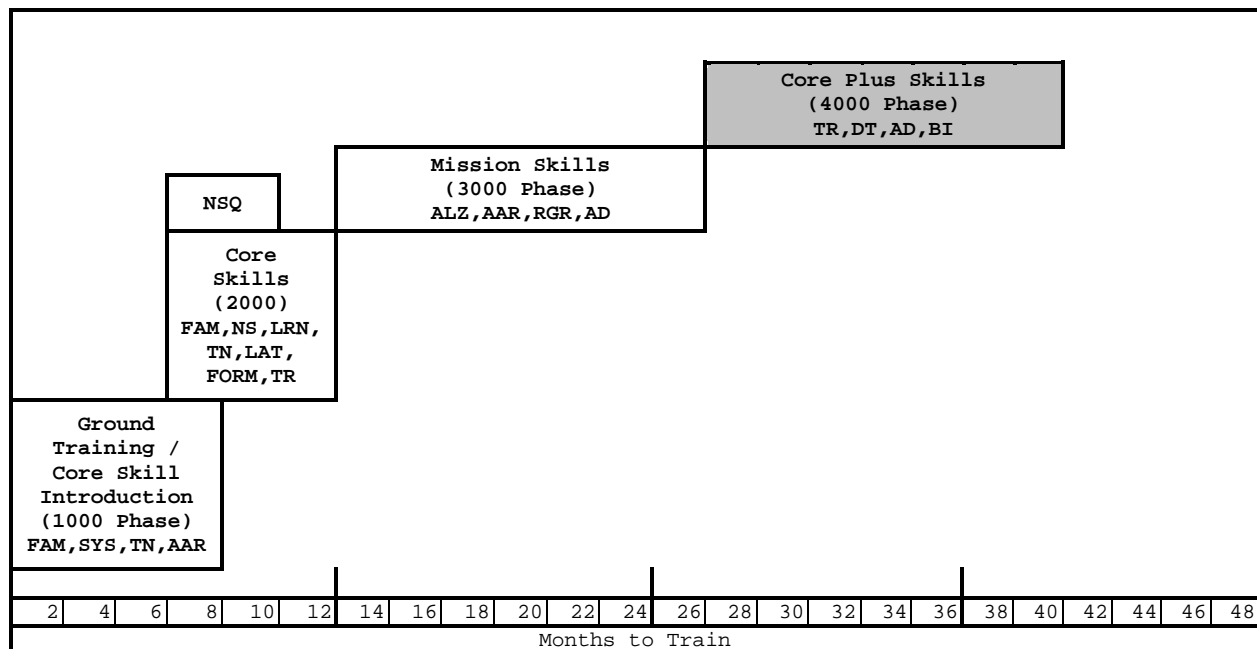
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CHAPTER 5

KC-130T FLIGHT MECHANIC MOS 6216

500. KC-130T FLIGHT MECHANIC 6216 INDIVIDUAL TRAINING AND READINESS REQUIREMENTS. This T&R Syllabus is based on specific goals and performance standards designed to ensure individual proficiency in Core and Mission Skills. The goal of this chapter is to develop individual and unit warfighting capabilities.

501. KC-130T FLIGHT MECHANIC TRAINING PROGRESSION MODEL. The training progression model below provides recommended core skill, qualification, and designation attainment timelines for the average Flight Mechanic.



502. INDIVIDUAL CORE SKILL PROFICIENCY (CSP) REQUIREMENTS. A CSP crew consists of individuals representing each crew position who have achieved and currently maintain Individual CSP. In order to be considered proficient in a Core Skill, an individual must attain and maintain proficiency in Core Skill events as delineated in the below paragraphs.

1. Events Required to Attain Individual CSP. To initially attain CSP in a Core Skill, an individual must simultaneously have a proficient status in all 2000 phase T&R events listed for that Core Skill:

INDIVIDUAL CORE SKILL PROFICIENCY (CSP) ATTAIN TABLE					
T&R events required to Attain CSP (2000 Phase)					
NS	LRN	TN	LAT	SEC FORM	IR TR
2150R	2160R	2200R	2260R	2300R	2400R
2151R		2250R			
		2251R			

Gray highlight & an R suffix on the event code = Refresher POI

2. Events Required to Maintain Individual CSP. To maintain CSP in a Core Skill, an individual must maintain proficiency in all 2000 phase T&R events listed for that Core Skill:

INDIVIDUAL CORE SKILL PROFICIENCY (CSP) MAINTAIN TABLE					
T&R events required to Maintain CSP (2000 Phase)					
NS	LRN	TN	LAT	SEC FORM	IR TR
2151R	2160R	2251R	2260R	2300R	2400R
Gray highlight & an R suffix on the event code = Refresher POI					

503. INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) REQUIREMENTS. An MSP crew consists of individuals representing each crew position who have achieved and currently maintain Individual MSP. To be considered proficient in a Mission Skill, an individual must attain and maintain proficiency in Mission Skill events as delineated in the below paragraphs.

1. Events Required to Attain Individual MSP. To initially attain MSP in a Mission Skill, an individual must simultaneously have a proficient status in all 3000 phase T&R events listed for that Mission Skill:

INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) ATTAIN TABLE			
T&R events required to Attain MSP (3000 Phase)			
ALZ	AAR	RGR	AD
3500R	3600R	3660R	3700R
3550R	3601R		3750R
	3650R		
Gray highlight & an R suffix on the event code = Refresher POI			

2. Events Required to Maintain Individual MSP. To maintain MSP in a Mission Skill, an individual must maintain proficiency in all 3000 phase T&R events listed for that Mission Skill:

INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) MAINTAIN TABLE			
T&R events required to Maintain MSP (3000 Phase)			
ALZ	AAR	RGR	AD
3550R	3600R	3660R	3750R
	3650R		
Gray highlight & an R suffix on the event code = Refresher POI			

3. Events Required to Attain Individual Proficiency in Core Plus / Mission Plus Skills. Proficiency in Core Plus Skills is not required to obtain unit CSP. Training to Core Plus Skills is at the discretion of the unit commanding officer. To initially attain proficiency in a Core Plus Skill, an individual must simultaneously have a proficient status in all T&R events listed for that Core Plus Skill:

INDIVIDUAL CORE PLUS SKILL ATTAIN TABLE			
T&R events required to Attain Core Plus Skill (4000 Phase)			
CORE PLUS SKILLS			MISSION PLUS
RF TR	DT	AD	BI
4400R	4410R	4700R	4710R
Gray highlight & an R suffix on the event code = Refresher POI			

4. Events Required to Maintain Individual Proficiency in Core Plus / Mission Plus Skills. To maintain proficiency in a Core Plus Skill, an individual must maintain proficiency in all T&R events listed in the table below for that Core Plus Skill:

INDIVIDUAL CORE PLUS SKILL MAINTAIN TABLE			
T&R events required to Maintain Core Plus Skill (4000 Phase)			
CORE PLUS SKILLS			MISSION PLUS
RF TR	DT	AD	BI
4400R	4410R	4700R	4710R
Gray highlight & an R suffix on the event code = Refresher POI			

504. REQUIREMENTS, QUALIFICATION AND DESIGNATION TABLES. The tables below delineate T&R events required to be completed to attain proficiency, and initial qualifications and designations. In addition to event requirements, all required stage lectures, briefs, squadron training, prerequisites, and other criteria shall be completed prior to completing final events. Qualification and designation letters signed by the commanding officer shall be placed in the individual's NATOPS jacket. Loss of proficiency in all qualification events causes the associated qualification to be lost. Regaining a qualification requires completing all R-coded syllabus events associated with that qualification.

INDIVIDUAL QUALIFICATION REQUIREMENTS	
Qualification	Event Requirements
NSQ	NITE LAB, NVD I & II, NS-2150, NS-2151, TN-2250, TN-2251 and requires 10 hours of total NVD time with at least 5 hours of Low Light Level (LLL) time.
FM-2 NATOPS EVALUATION	NTPS-6116. Core Introduction Phase complete.
ANNUAL NATOPS	NTPS-6118. Annual NATOPS evaluation designation.

INDIVIDUAL DESIGNATION REQUIREMENTS	
Designation	Event Requirements
RIGHT SEAT TAXI OBSERVER	RQD-6101. Upon completion of RQD-6100, the squadron commanding officer shall designate FM a qualified right seat taxi observer.
FCF	FCF-6106.
FM-1 NATOPS EVALUATION	NTPS-6117. Core Skill and Mission Skill Phase complete.

#### 505. PROGRAMS OF INSTRUCTION (POI)

1. Basic (B) POI. The time required to train a KC-130 Flight Mechanic to Core Plus will vary depending on the previous Flight Mechanic's experience. Basic and Transition Flight Mechanics shall fly the entire Basic POI. All initial flying codes will only utilize the aircraft.

WEEKS	COURSE	PERFORMING ACTIVITY
1-6	NACCS	NAS Pensacola, FL
7-13	KC-130 Flight Mechanic Ground	Tactical Squadron
14-26	Core Skill Introduction Training	Tactical Squadron
27-52	Core Skill Training	Tactical Squadron
53-105	Mission Skill Training	Tactical Squadron
106-158	Core Plus Training	Tactical Squadron

2. Refresher (R) POI. Refresher Flight Mechanics represent a varying background and should fly flights coded with an "R". Squadron commanding officers will review the qualifications, previous experience, currency, and demonstrated ability of Refresher Flight Mechanics with a view towards waiving and/or combining required flights.

WEEKS	COURSE	PERFORMING ACTIVITY
1-14	Core Skill Introduction, Core Skill, and Mission Skill Training	Tactical Squadron

#### 506. ACADEMIC TRAINING

1. Academic training shall be conducted for each phase/stage of the syllabus. Where indicated, standardized academic training materials exist and may be obtained from the sponsoring activity.

2. External academic courses of instruction available to complete the syllabus are listed below:

COURSE	ACTIVITY
Naval Aircrew Candidate Course*	NAS Pensacola, FL
Survival, Evasion, Resistance, and Escape (SERE) Course*	NAS Brunswick ME NAS North Island CA
NITE lab*	Tactical Squadron
Flight Mechanic Maintenance Course*	Tactical Squadron
Flight Mechanic Flight Course*	Tactical Squadron
Weapons and Tactics Instructor (WTI)	MAWTS-1 Yuma, AZ
Environmental Survival Courses	Regional/Seasonal Survival Schools
Advanced Airlift Tactics Training Course (AATTC)	AATTC, St. Joseph MO
*External ground training courses of instruction which are <u>required</u> to complete the syllabus.	

#### 507. CORE SKILL INTRODUCTION PHASE (1000)

##### 1. General

a. Upon completion of this phase of training, the Flight Mechanic will be NATOPS qualified as a FM-2. The Flight Mechanic will be capable of basic aircraft operation to include emergency procedures and crew resource management. The NATOPS check may be conducted any time after completion of the Core Skill Introduction Phase. Commanders shall not designate student Flight Mechanics as an FM-2 until satisfactory completion of the entire Core Skill Introduction Phase. Upon the completion of the FM-2 NATOPS check, Flight Mechanics shall log the NTPS-6116 tracking code.

b. Upon completion of the Core Skills Introduction Training, Flight Mechanics may receive initial Core Skill and Mission Skill (2000 and 3000 phase) training from a qualified Flight Engineer (FE-1).

c. Crew Resource Management shall be briefed for all flights and events.

## 2. Familiarization (FAM)

a. Purpose. Familiarize the student Flight Mechanic in correct procedures for: turnaround inspections (preflight/post flight), servicing, engine start, taxi, run up, takeoff, cruise, descent, landing and securing, and normal and emergency procedures.

b. Crew Requirements. Shall be instructed/evaluated by a Flight Engineer Instructor.

c. Academic/Ground Training. Prior to each flight, 4.0 hours of ground instruction are required.

FAM-1000	4.0	*	R	1	KC-130	A	(N)
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Goal. Introduce the student to turnaround inspections (preflight/post flight), squadron SOP, and normal and emergency procedures.

Requirement. A Flight Engineer Instructor will instruct the student Flight Mechanic on correct turnaround inspections (preflight/post flight), squadron SOP, and normal and emergency procedures per current instructions.

Performance Standard. The student Flight Mechanic will be familiar with turnaround inspections (preflight/post flight), squadron SOP, normal and emergency procedures per current instructions.

Prerequisites. Flight Mechanic Ground Course.

FAM-1100	4.0	*	R	1	KC-130	A	(N)
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Goal. Refine the student to turnaround inspections (preflight/post flight).

Requirement. A Flight Engineer Instructor will instruct the student Flight Mechanic on correct turnaround inspections (preflight/post flight) per current instructions.

Performance Standard. Upon completion, the student Flight Mechanic will be familiar with turnaround inspections (preflight/post flight) per current instructions.

Prerequisite. FAM-1000.

FAM-1101	4.0	*	R	1	KC-130	A	(N)
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Goal. Familiarize the student Flight Mechanic on aircraft engine and APU systems.

Requirement. A Flight Engineer Instructor will instruct the student Flight Mechanic on aircraft engines.

Performance Standard. Upon completion, the student Flight Mechanic will be familiar with aircraft engines, operation, possible malfunctions, and component locations.

Prerequisites. FAM-1100.

FAM-1102	4.0	*	R	1	KC-130	A	(N)
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Goal. Familiarize the student Flight Mechanic on aircraft propeller systems.

Requirement. A Flight Engineer Instructor will instruct the student Flight Mechanic on aircraft propeller systems.

Performance Standard. Upon completion, the student Flight Mechanic will be familiar with aircraft propellers, operation, possible malfunctions, and component locations.

Prerequisites. FAM-1100.

FAM-1103	4.0	*	R	1	KC-130	A	(N)
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Goal. Familiarize the student Flight Mechanic on aircraft electrical systems.

Requirement. A Flight Engineer Instructor will instruct the student Flight Mechanic on aircraft electrical systems.

Performance Standard. Upon completion, the student Flight Mechanic will be familiar with aircraft electrical systems operation, possible malfunctions, and component locations.

Prerequisites. FAM-1100.

FAM-1104	4.0	*	R	1	KC-130	A	(N)
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Goal. Familiarize the student Flight Mechanic on aircraft bleed air and anti-icing/de-icing systems.

Requirement. A Flight Engineer Instructor will instruct the student Flight Mechanic on aircraft bleed air and anti-icing/de-icing systems.

Performance Standard. Upon completion, the Student Flight Mechanic will be familiar with aircraft bleed air and anti-icing/de-icing systems operation, possible malfunctions, and component locations.

Prerequisites. FAM-1100.

FAM-1105	4.0	*	R	1	KC-130	A	(N)
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Goal. Familiarize the student Flight Mechanic on aircraft fuel system.

Requirement. A Flight Engineer Instructor will instruct the student Flight Mechanic on aircraft fuel systems.



Performance Standard. Upon completion, the student Flight Mechanic will be familiar with aircraft fuel systems, operation, possible malfunctions and component locations.

Prerequisites. FAM-1100.

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FAM-1106	4.0	*	R	1	KC-130	A	(N)
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Goal. Familiarize the student Flight Mechanic on aircraft hydraulic systems.

Requirement. A Flight Engineer Instructor will instruct the student Flight Mechanic on hydraulic systems.

Performance Standard. Upon completion, the student Flight Mechanic will be familiar with aircraft hydraulic systems, their operation, possible malfunctions, and component locations.

Prerequisites. FAM-1100.

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FAM-1107	4.0	*	R	1	KC-130	A	(N)
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Goal. Familiarize the student Flight Mechanic on aircraft air conditioning and pressurization and oxygen systems.

Requirement. A Flight Engineer Instructor will instruct the student Flight Mechanic on aircraft air conditioning/pressurization systems.

Performance Standard. Upon completion, the student Flight Mechanic will be familiar with aircraft air conditioning/pressurization systems, operation, possible malfunctions, and component locations.

Prerequisites. FAM-1100.

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FAM-1108	4.0	*	R	1	KC-130	A	(N)
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Goal. Familiarize the student Flight Mechanic on aircraft communication and navigation systems.

Requirement. A Flight Engineer Instructor will instruct student Flight Mechanic on aircraft communication and navigation systems.

Performance Standard. Upon completion, the student Flight Mechanic will be familiar with aircraft communication/navigation systems, operation, possible malfunctions, and component locations.

Prerequisites. FAM-1100.

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FAM-1109	4.0	*	R	1	KC-130	A	(N)
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Goal. Familiarize the student Flight Mechanic on air-to-air refueling systems, fixed wing air-to-air refueling observer procedures and duties.

Requirement. A Flight Engineer Instructor will instruct student Flight Mechanic on aircraft air-to-air refueling systems and observer duties.

Performance Standard. The student Flight Mechanic shall be familiar on FWAAR/TRAAR refueling procedures and observer duties.

Prerequisites. FAM-1100.

External Syllabus Support. Fixed-wing receiver aircraft and Special Use Airspace (SUAS).

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FAM-1110	4.0	*	R	1	KC-130	A	(N)
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Goal. Familiarize the student Flight Mechanic on helicopter air-to-air refueling procedures and observer duties.

Requirement. The student Flight Mechanic shall be familiar on helicopter air-to-air refueling procedures and observer duties.

Prerequisites. FAM-1109.

External Syllabus Support. Helicopter receiver aircraft and Special Use Airspace (SUAS).

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FAM-1111	4.0	*	R	1	KC-130	A	(N)
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Goal. Evaluate the student Flight Mechanic on air-to-air refueling procedures and observer duties.

Requirement. The student Flight Mechanic shall be familiar on air-to-air refueling procedures and observer duties.

Performance Standard. Upon completion, the student Flight Mechanic shall be familiar with air-to-air refueling systems, operation, possible malfunctions, component locations and observer duties.

Prerequisites. FAM-1110.

External Syllabus Support. Fixed-wing or helicopter receiver aircraft and Special Use Airspace (SUAS).

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FAM-1112	4.0	*	R	1	KC-130	A	(N)
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Goal. Familiarize the student Flight Mechanic on low level operations per current instructions.

Requirement. The student Flight Mechanic shall be familiar with low-level operations and procedures.

Performance Standard. Upon completion, the student Flight Mechanic will be familiar with low-level operations and procedures IAW KC-130 ANTTTP and NFM.

Prerequisites. FAM-1100.

FAM-1113      4.0      \*      R      1 KC-130      A      (N)

Goal. Review previous instructions as necessary.

Requirement. A Flight Engineer Instructor will review all previous instructions as necessary.

Performance Standard. Upon completion of FAM-1113, the student Flight Mechanic will be prepared for a FM-2 NATOPS evaluation.

Prerequisites. FAM-1100 through FAM-1112.

508. CORE SKILL PHASE (2000)

1. General. The focus of Core Skill Phase is to train the Flight Mechanic in duties essential to wartime employment. This includes: Night Systems (NS) operations, Long Range Navigation (LRN), Tactical Navigation (TN), Low Altitude Tactics (LAT), Formation (FORM), and IR Threat Reaction (TR).

a. The focus will also be on flight crew resource management, aircraft preflight preparation, location and use of emergency equipment, ground and in-flight emergency procedures, aircraft post flight procedures, systems operation, system malfunctions, corrective actions, fault isolation and in-flight fault isolation.

b. Non-NSQ Flight Mechanics under instruction shall be instructed by an NSI when conducting NS Training. Non-NSQ syllabus initial events may be flown with a current squadron Flight Engineer 1, FEI, ANI, or WTI provided the instructor is proficient in the event being conducted.

c. The NSQ qualification syllabus consists of NS-2150, NS-2151, TN-2250, TN-2251 and requires 10 hours of total NVD time with at least 5 hours of Low Light Level (LLL) time. The initial 10 hours shall be flown in the aircraft. Flight Mechanics successfully completing these requirements shall be issued a Night Systems Qualified letter by the squadron commanding officer.

d. Upon completion of each event, the FM-2 will be able to fly subsequent events in this phase without instruction with the exception of NSQ syllabus events.

e. Crew Resource Management shall be briefed for all flights and events.

2. Familiarization (FAM)

a. Purpose. Maintain Flight Mechanic proficiency on administrative flights.

b. General. The Flight Mechanic under instruction shall fly initial codes with a qualified Flight Engineer 1. Subsequent events may be flown with a qualified crew provided the Flight Mechanic meets the pre-requisites.

c. Crew Requirements. Shall be instructed/evaluated by a Flight Engineer 1.

d. Academic/Ground Training. Each flight requires 1 hour of classroom instruction.

FAM-2000      2.0    90      R    1 KC-130    A    (N)

Goal. Maintain proficiency in normal and emergency procedures during day/night flight operations.

Requirement. Review normal and emergency procedures during day flight operations per current instructions.

Performance Standard. Student Flight Mechanic shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. NTPS-6116.

### 3. Night Systems (NS)

a. Purpose. To train the Flight Mechanic in NS. The Flight Mechanic will be capable of performing crew duties using NVDs during High Light Level (HLL) and Low Light Level (LLL) conditions.

#### b. General

(1) The NSQ qualification syllabus consists of NS-2150, NS-2151, TN-2250, TN-2251 and requires 10 hours of total NVD time with at least 5 hours of Low Light Level (LLL) time. The initial 10 hours shall be flown in the aircraft. Flight Mechanics successfully completing these requirements shall be issued a Night Systems Qualified letter by the squadron commanding officer.

(2) For Flight Mechanics that are NSQ syllabus complete, Non-NSQ syllabus initial codes may be flown with an NSQ FEI/ANI/LMI provided the instructor is proficient in the code being conducted.

c. Crew Requirements. Flight Mechanics conducting NS training shall be instructed by either a Flight Engineer NSI or Loadmaster NSI for all Night Systems training.

d. Academic/Ground Training. MAWTS-1 KC-130 NVD 1 and 2 Academic Support Package (ASP) courses and NITE lab.

NS-2150      2.0    365      R    1 KC-130    A    NS

Goal. Introduce the Flight Mechanic to NVD operations under HLL conditions.

Requirement. Preflight shall include a flight station, cargo compartment and exterior lighting demonstration with NVDs. Instruct the Flight Mechanic in the use of NVDs to include normal and emergency procedures at altitude and in the terminal environment. Emphasize NVD considerations, calibration, preflight, and in-flight normal and emergency procedures.

Performance Standard. Demonstrate the ability to properly pre-flight and don NVDs, diagnose NVD emergencies and apply corrective action, understand capabilities and limitations of NVDs under HLL conditions.

Prerequisite. FAM-2000.

NS-2151      2.0    180      R    1 KC-130   A    NS

Goal. Introduce Flight Mechanic to NVD operations under LLL conditions.

Requirement. Instruct the Flight Mechanic in the use of NVDs during LLL conditions to include normal and emergency procedures at altitude and in the terminal environment. Focus on the capabilities and limitations of the NVDs under LLL conditions, preflight, emergency procedures, calibration, preparation and in-flight use. The Flight Mechanic will demonstrate knowledge of normal and emergency procedures outlined in the KC-130 ANTTP and NVD specific items in the MAWTS-1 NVD Fixed-Wing manual.

Performance Standard. The Flight Mechanic shall demonstrate the ability to properly pre-flight and don NVDs, diagnose NVD emergencies and apply corrective action, understand capabilities and limitations of NVDs under LLL conditions.

Prerequisite. NS-2150.

#### 4. Long Range Navigation (LRN)

a. Purpose. Review long-range, over water navigation procedures and introduce the Flight Mechanic to squadron SOPs concerning deployment operations.

b. General. Fly an extended over water flight and review over water procedures placing emphasis on mission planning, emergency equipment provisions, fuel requirements, and aircraft servicing.

c. Crew Requirements. Shall be instructed by a Flight Engineer 1.

d. Academic/Ground Training. Specific mission planning, emergency equipment provisions, fuel requirements, aircraft servicing, and NATOPS long range cruise considerations.

LRN-2160      8.0    365      R    1 KC-130   A    (N)

Goal. Refine extended over water procedures.

Requirement. Fly an extended over water flight and review over-water procedures placing emphasis on mission planning, emergency equipment provisions, fuel requirements, and aircraft servicing (Fuel, LOX, Engines, & Propellers).

Performance Standard. Flight Mechanic shall perform responsibilities/duties IAW NFM.

Prerequisite. FAM-2000.

#### 5. Tactical Navigation (TN)

a. Purpose. Train the Flight Mechanic in low level procedures.

b. Crew Requirements

(1) Non-NSQ syllabus initial events shall be flown with a Flight Engineer 1 provided the instructor is proficient in the event being conducted.

(2) Flight Mechanics conducting NS training shall be instructed by either a Flight Engineer NSI or Loadmaster NSI for all NSQ syllabus initial codes.

(3) Subsequent events and non-syllabus NS or NS optional codes may be initially flown with a proficient NSQ Flight Engineer or Loadmaster as long as the Flight Mechanic has met the prerequisites for the event.

c. Academic/Ground Training. Utilize academic courseware as outlined in the MAWTS-1 Course Catalog and review MAWTS-1 ASPs, NFM and KC-130 ANTP.

TN-2200	2.0	365	R	1	KC-130	A	D
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Goal. Introduce the Flight Mechanic to day low-level navigation procedures.

Requirement. Fly a low level route per KC-130 ANTP procedures.

Performance Standard. The Flight Mechanic shall perform responsibilities/duties IAW applicable NATOPS flight manual.

Prerequisite. FAM-2000.

External Syllabus Support. Approved Military Training Route (MTR) or restricted area.

TN-2250	2.0	365	R	1	KC-130	A	NS
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Goal. Introduce the Flight Mechanic to NVD low-level navigation under HLL.

Requirement. Fly a night low level route PER KC-130 ANTP procedures.

Performance Standard. Flight Mechanic shall perform responsibilities/duties IAW NFM.

Prerequisite. NS-2150, TN-2200.

External Syllabus Support. Approved Military Training Route (MTR) or restricted area.

TN-2251	2.0	180	R	1	KC-130	A	NS
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Goal. Introduce the Flight Mechanic to NVD low-level navigation under LLL.

Requirement. Fly a night low level route PER KC-130 ANTP procedures.

Performance Standard. Flight Mechanic shall perform responsibilities/duties IAW NFM.

Prerequisite. NS-2151, TN-2250.

External Syllabus Support. Approved Military Training Route (MTR) or restricted area.

6. Low Altitude Tactics (LAT)

a. Purpose. To attain and maintain the Low Altitude Tactics Core Skill. Upon completion of this stage, the Flight Mechanic will be capable of single ship low altitude ingress and egress to mission objective areas during the day.

b. General. General LAT rules of conduct (ROC) are contained in NAVMC 3500.14 and KC-130 specific LAT guidance is contained in the KC-130 ANTP.

c. Crew Requirements. Shall be instructed by a Flight Engineer 1.

d. Academic/Ground Training. Review the low level navigation and LAT chapters of the KC-130 ANTP.

LAT-2260        2.0    180        R   1 KC-130   A    D

Goal. Introduce and qualify the Flight Mechanic, or to maintain proficiency for the LAT qualified Flight Mechanic, in the duties associated with low altitude tactics flights in a low to medium ground threat environment.

Requirement. Emphasis will be placed on cargo compartment preparation, crew briefing, lookout doctrine, scan for threats, crew coordination and combat entry/exit checklists. This event may include air-to-air refueling, air delivery or any type of air/land delivery.

Performance Standard. Per the NFM and KC-130 ANTP.

Prerequisite. TN-2200.

External Syllabus Support. LAT approved MTR or restricted area.

7. Formation (FORM)

a. Purpose. Train the Flight Mechanic in formation procedures.

b. Crew Requirements. Non-NSQ Flight Mechanics under instruction shall be instructed by a Flight Engineer NSI or Loadmaster NSI when conducting NS Training. Non-NSQ syllabus initial events may be flown with a FE-1 provided the instructor is proficient in the event being conducted.

c. Academic/Ground Training. The instructor and student shall review the KC-130 ANTP Formation chapter.

FORM-2300        2.0    365        R   2 KC-130   A    (NS)

Goal. Proficiency training in formation procedures.

Requirement. Fly a two plane formation flight per the NATOPS and KC-130 ANTP.

Performance Standard. The Flight Mechanic shall perform responsibilities/duties IAW NATOPS flight manual and KC-130 ANTPP.

Prerequisite. FAM-2000.

8. Threat Reaction (TR)

a. Purpose. To attain and maintain the Core Skill Threat Reaction (IR) in a low to medium infrared (IR) threat environment. Upon completion of this stage, the Flight Mechanic will be capable of flying in a ground infrared threat environment during day or night.

b. General

(1) The Flight Mechanic shall be introduced to the KC-130T ASE suite and mission planning considerations for IR SAM defense. The sortie should focus on aircrew immediate action drills when confronted with threat systems from both front and rear aspects under varying mission profiles.

(2) Aircraft must have an operational ASE suite that supports infrared (IR) threat reaction.

(3) Ordnance must be expended on all initial events. Subsequent events can be simulated.

(4) Appropriate ground threat emitters should be available.

c. Crew Requirements. The Flight Mechanic under instruction will be instructed by a Flight Engineer 1 for all initial codes provided the instructor is proficient in the event.

d. Academic/Ground Training. Review the NFM, KC-130 ANTPP, Classified ANTPP, AFTTP 3-1 Threat Reference Guide. A WTI should administer the KC-130 ASE classes from the MAWTS-1 KC-130 Specific Academic Support Package.

TR-2400            2.0    365            R    1 KC-130    A/S    (NS)

Goal. Introduce the operational use of ASE and threat counter-tactics against small arms, AAA and IR SAM threat systems.

Requirement. Introduce the ASE counter measures dispensing system setup, missile warning system setup, jamming system, and threat reaction. The Flight Mechanic should be exposed to a variety of threat situations of increasing intensity using both the Automatic and Manual modes of the dispensing system. Threat reaction maneuvering should include the take-off, cruise and approach phases of flight.

Performance Standard. The Flight Mechanic should be able to correctly operate the aircraft's ASE suite in an IR SAM environment, and react timely and correctly to threat calls. Proper aircrew coordination shall be performed in threat reaction.

Prerequisite. LAT-2260.



Ordinance. 120 flare expendables (required for initial event).

External Syllabus Support. Appropriate counter-measures range, a Smokey SAM crew with a minimum of 5 Smokey SAMs, MWS stimulator team if available.

509. MISSION SKILL PHASE (3000)

1. General. The focus of the Mission Skill Phase is to train the Flight Mechanic in the skills required to meet the Marine Corps Tasks (MCT). These missions include: Assault Landing Zone (ALZ) operations, Air-to-Air Refueling (AAR), Rapid Ground Refueling (RGR), and Air Delivery (AD).

a. The FM under instruction shall receive the appropriate MAWTS-1 ASP lectures prior to the appropriate stage of training.

b. A Flight Engineer NSI or Loadmaster NSI is required only if the initial sortie is conducted using NVD's and the FM under instruction is not NSQ. A FE-1 or LMI who is NSQ may instruct a NSQ FM on initial events flown using NVD's. Any FE-1 or LMI may instruct these events during the day or unaided.

c. On completion of the required events contained in this phase, the Flight Mechanic shall receive a Flight Mechanic 1 NATOPS evaluation. The NATOPS check may be conducted any time after completion of the Mission Skill phase. Commanders shall not designate Flight Mechanics as an FM-1 until satisfactory completion of the entire 2000 and 3000 phases. Upon NATOPS FM-1 check completion, Flight Mechanics shall log the NTPS-6117 tracking code and NTPS-6118 annual NATOPS check flight. All NATOPS checks shall be administered by a designated ANI/NI.

d. Crew Resource Management shall be briefed for all flights and events.

2. Assault Landing Zone (ALZ)

a. Purpose. To attain and maintain the Mission Skill of operating from an ALZ. Upon completion of this stage, the Flight Mechanic will be capable of day or night ALZ operations and will be knowledgeable of unimproved ground operation considerations.

b. General

(1) For the purposes of this training syllabus, ALZ operations are defined as terminal area operations from an airfield prepared with either day or night EAF markings as defined in the KC-130 ANTTP. Ideally, MMT will be utilized for terminal control with tactical NAVAIDS available.

(2) Emphasis in the unimproved environment is to introduce operating procedures designed to increase safety and reduce wear on the aircraft, footprint loading techniques, and airfield suitability services within the Marine Corps and DOD.

c. Crew Requirements. A Flight Engineer NSI or Loadmaster NSI is required only if the initial sortie is conducted using NVD's and the FM under instruction is not NSQ. A FE-1 or LMI who is NSQ may instruct a NSQ FM on initial events flown using NVD's. Any FE-1 or LMI may instruct these events during the day or unaided.

d. Academic/Ground Training. Review Assault Landing Zone operations in the KC-130 ANTTP. Review MAWTS-1 ASP ALZ courseware. Familiarize the Flight Mechanic with ground emergencies in an austere environment and performance data for specific circumstances applicable pubs for unimproved runway operation.

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ALZ-3500	2.0	365	R	1	KC-130	A	D
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Goal. Introduce Day ALZ procedures at improved/unimproved fields.

Requirement. Introduce maximum effort takeoffs and landings at improved/unimproved field IAW KC-130 ANTTP. Review all appropriate performance data.

Performance Standard. Flight Mechanic shall perform responsibilities/duties IAW NFM.

Prerequisite. FAM-2000.

External Syllabus Support. Standard USMC ALZ day panel setup utilizing AMP-1, 2 or 3 markings. MMT or MWSS EAF personnel for terminal control, or USAF Special Tactics Team (SST).

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ALZ-3550	2.0	365	R	1	KC-130	A	NS
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Goal. Introduce NVD ALZ procedures.

Requirement. Introduce maximum effort takeoffs and landings while utilizing NVD's IAW KC-130 ANTTP. Review all appropriate performance data.

Performance Standard. Flight Mechanic shall perform responsibilities/duties IAW NFM.

Prerequisite. NS-2151, ALZ-3500.

External Syllabus Support. Standard USMC ALZ IR lighting utilizing AMP-1, 2 or 3 markings. MMT or MWSS EAF personnel for terminal control.

### 3. Air-to-Air Refueling (AAR)

a. Purpose. To attain and maintain the Air-to-Air Refueling (AAR) Mission Skill. Upon completion of this stage, the Flight Mechanic will be capable of fixed wing, tilt rotor, and helicopter AAR operations in the day or night environment.

b. General. The FM shall conduct normal and emergency procedures associated with air-to-air refueling in addition to crew responsibilities in day, night and NVD procedures.

c. Crew Requirements. A Flight Engineer NSI or Loadmaster NSI is required only if the initial sortie is conducted using NVD's and the FM under instruction is not NSQ. A FE-1 or LMI who is NSQ may instruct a NSQ FM on initial events flown using NVD's. Any FE-1 or LMI may instruct these events during the day or unaided.

d. Academic/Ground Training. Review NATOPS Flight Manual, NATOPS flight manual supplements, ATP-56(B), KC-130 ANTTTP, and MAWTS-1 Tactical AAR Courseware relating to fixed-wing AR procedures.

AAR-3600      3.0    365      R    1 KC-130   A    (N)

Goal. FWAAR/TRAAR procedures.

Requirement. This event can be flown in either day or night conditions with NVDs optional. Conduct single tanker rendezvous procedures and receiver management. Discuss emergency procedures related with AAR. EMCON procedures should be introduced for the completion of the initial syllabus event.

Performance Standard. Flight Mechanic shall demonstrate knowledge of normal and emergency procedures, and CRM outlined in the KC-130 NFM, ANTTTP and ATP-56B.

Prerequisite. FAM-2000.

External Syllabus Support. Fixed-wing or tilt rotor receiver aircraft.

AAR-3601      3.0    365      R    1 KC-130   A    D

Goal. Day Helicopter AAR (HAAR) procedures.

Requirement. This event shall be flown during the day. Fly a helicopter AAR mission and review normal and emergency helicopter refueling procedures per KC-130 ANTTTP and ATP-56(B). Use of EMCON procedures is optional.

Performance Standard. Flight Mechanic shall demonstrate knowledge of normal and emergency procedures outlined in the NFM, ANTTTP, and ATP-56B.

Prerequisite. FAM-2000.

External Syllabus Support. Helicopter receiver aircraft and special use airspace.

AAR-3650      3.0    365      R    1 KC-130   A    NS

Goal. NVD HAAR procedures.

Requirement. Conduct single tanker rendezvous procedures and receiver management. Fly a helicopter AAR mission and review normal and emergency helicopter refueling procedures at night per KC-130 ANTTTP and ATP-56(B). Use of EMCON procedures is optional.

Performance Standard. Flight Mechanic shall demonstrate knowledge of normal and emergency procedures outlined in the NFM, ANTTTP, and ATP-56B.

Prerequisite. AAR-3601, NS-2150 (HLL) or NS-2151 (LLL).

External Syllabus Support. Helicopter receiver aircraft and special use airspace.

#### 4. Rapid Ground Refueling (RGR)

a. Purpose. To attain and maintain the Rapid Ground Refueling Mission Skill. Upon completion of this stage, the Flight Mechanic will be capable of conducting rapid ground refueling of aircraft and ground vehicles in any environment, day or night.

b. Crew Requirements. A Flight Engineer NSI or Loadmaster NSI is required only if the initial sortie is conducted using NVD's and the FM under instruction is not NSQ. A FE-1 or LMI who is NSQ may instruct a NSQ FM on initial events flown using NVD's. Any FE-1 or LMI may instruct these events during the day or unaided.

c. Academic/Ground Training. The Flight Mechanic should review the KC-130 ANTTTP RGR chapter and the RGR class in the MAWTS-1 KC-130 Specific Academic Support Package. Complete a training that includes but is not limited to a review of hand and arm signals, defense of site, flight operations around site, and crew responsibilities/CRM on the ground.

RGR-3660	0.0	365	R	1	KC-130	A	(N)
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Goal. Train the FM in rapid ground refueling operations.

Requirement. Instructor shall demonstrate briefing requirements for RGR operations. Introduce personnel qualifications, duties, responsibilities and RGR crew coordination. Introduce RGR equipment, site weapons and passenger considerations, site configurations and threat considerations. Introduce RGR fuel planning, site setup, operation, and breakdown procedures, and NVD considerations during RGR operations (optional).

Performance Standard. Flight Mechanic shall perform responsibilities/duties IAW NFM.

Prerequisite. FAM-2000.

External Syllabus Support. Crash/Fire/Rescue Support. Receiver aircraft or ground vehicle (as appropriate).

#### 5. Air Delivery (AD)

a. Purpose. To attain and maintain the Mission Skill of AD. Upon completion of this stage, the Flight Mechanic will be capable of planning and executing an AD of cargo or static line personnel, day or night.

b. General. Initial AD event shall be actual drop of cargo, personnel or a combination. Subsequent updating of the event can be achieved by conducting a simulated drop.

c. Crew Requirements. A Flight Engineer NSI or Loadmaster NSI is required only if the initial sortie is conducted using NVD's and the FM under instruction is not NSQ. A FE-1 or LMI who is NSQ may instruct a NSQ FM on initial events flown using NVD's. Any FE-1 or LMI may instruct these events during the day or unaided.

d. Academic/Ground Training. Review KC-130 ANTTP Air Delivery chapter, KC-130 Tactical Pocket Guide, and MAWTS-1 KC-130 Specific Academic Support Package.

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AD-3700	2.0	365	R	1	KC-130	A	D
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Goal. Train the Flight Mechanic in day air delivery procedures.

Requirement. Review personnel, CDS, combination and HE air delivery procedures. The FM shall demonstrate the ability to ingress to an objective area and manage checklists for AD procedures. Emphasis should be placed on CRM and AD procedures.

Performance Standard. Flight Mechanic shall perform responsibilities/duties IAW the NATOPS flight manual and KC-130 ANTTP.

Prerequisite. FAM-2000.

External Syllabus Support. AD unit of any service for cargo rigging and DZ control.

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AD-3750	2.0	365	R	1	KC-130	A	NS
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Goal. Train and evaluate the Flight Mechanic in NS air delivery procedures.

Requirement. Review personnel, CDS, combination and HE air delivery procedures while on NVDs. The FM shall demonstrate the ability to ingress to an objective area and manage checklists for AD procedures. Emphasis should be placed on CRM and AD procedures.

Performance Standard. Flight Mechanic shall perform responsibilities/duties IAW the NATOPS flight manual and KC-130 ANTTP.

Prerequisite. AD-3700, (NS-2150 HLL or NS-2151 LLL).

External Syllabus Support. AD unit of any service for cargo rigging and DZ control.

#### 510. CORE PLUS SKILL PHASE (4000)

1. General. Upon completion of this phase of training, the Flight Mechanic will be proficient in day and night RADAR Threat Reaction (TR), Air-to-Air Defensive Tactics (DT), advanced AD (combination, HALO/HAHO) and Battlefield Illumination (BI).

a. Upon completion of each stage in this phase, the FM-1 shall be able to fly subsequent events in the stage without instruction. For example: Once an FM-1 has completed DT-4411 he is now considered DT complete. The FM-1 is now qualified to fly all events in the DT stage without the aid of an instructor.

b. Crew Resource Management shall be briefed for all flights and events.

## 2. Threat Reaction (TR)

a. Purpose. To attain and maintain the Core Plus Skill of Threat Reaction (TR) in a RADAR threat environment. Upon completion of this phase, the Flight Mechanic will be capable of flying in a ground RADAR threat environment during day or night.

### b. General

(1) Aircraft must have an operational ASE suite that supports radio frequency (RF) threat reaction.

(2) Appropriate chaff shall be loaded prior to flight.

(3) Appropriate ground threat emitters shall be available.

c. Crew Requirements. A Flight Engineer NSI or Loadmaster NSI is required only if the initial sortie is conducted using NVD's and the FM under instruction is not NSQ. A FEI or LMI who is NSQ may instruct a NSQ FM on initial events flown using NVD's. A FEI or LMI may instruct these events during the day or unaided.

d. Academic/Ground Training. Review the NFM, KC-130 ANTP, Classified ANTP, AFTTP 3-1 Threat Reference Guide. A WTI should administer the KC-130 ASE classes from the MAWTS-1 KC-130 Specific Academic Support Package.

TR-4400            2.0    365            R    1 KC-130    A/S    (NS)

Goal. Introduce surface RADAR threat during a tactical mission profile.

Requirement. Conduct and train in RF Counter tactics. Introduce FM to pertinent ground loading procedures, system setup and operation of ASE systems in flight, emphasis on evasive flight techniques in coordination with ASE employment. Conduct defensive maneuvering against ground RF threat. Emphasize briefing, conduct of flight, and lookout doctrine. IR threat reaction should also be practiced during this event.

Performance Standard. The FM shall perform responsibilities/duties IAW the NATOPS flight manual and KC-130 ANTP.

Prerequisite. LAT-2260.

Ordinance. 160 chaff, 120 flares.

External Syllabus Support. Approved emitter range or restricted area with mobile emitters available. SUAS authorized for expendables.

## 3. Defensive Tactics (DT)

a. Purpose. To attain and maintain the Core Plus Skill of employing Defensive Tactics against an air threat.

b. General. The DT requirements consist of DT-4410. The following is recommended but not required:

(1) Use of the Rear Vision Device (RVD) and ASE suite.

(2) Appropriate chaff and decoy flares loaded prior to flight if available.

c. Crew Requirements. DT shall be instructed by any WTI.

d. Academic/Ground Training. Review the KC-130 ANTTP, Classified ANTTP, and AFTTP 3-1 Threat Reference Guide concerning air-to-air threats. Review the KC-130 ASE, DT, Stress & Performance Limitations and Threat Counter-tactics classes from the MAWTS-1 KC-130 Specific Academic Support Package.

DT-4410            2.0    365            R    1 KC-130, 1 Adversary    A    D

Goal. Train in defensive maneuvering in relation to an air-to-air threat.

Requirement. The DTI shall brief and introduce DT briefing requirements. Practice defensive maneuvers with emphasis on hard turns, break turns, maneuvering velocity, one-circle/two-circle fights and negating tracking solutions. The flight preparation for this event shall include threat analysis, ASE and expendable integration with regard to the threat, and a detailed aircrew brief on threat reaction throughout all phases of an attack. CRM shall be emphasized to include incorporation of the RVD, aircrew lookout doctrine/scan sectors and threat call template. An event debrief with the aggressor pilot is recommended.

Performance Standard. The FM should demonstrate a working knowledge of A/A RADAR, A/A gun and IR missile defense and one-circle/two-circle considerations.

Prerequisite. LAT-2260.

Ordinance. 120 flares, 160 chaff.

External Syllabus Support. Aggressor aircraft and approved airspace. SUAS authorized for expendables.

#### 4. Air Delivery (AD)

a. Purpose. To attain and maintain the Core Plus Skill of Air Delivery (AD). Upon completion of this phase, the Flight Mechanic will be capable executing HALO/HAHO AD.

b. Crew Requirements. Shall be instructed by a FEI/LMI or NSI (if NS).

c. Academic/Ground Training. Review KC-130 ANTTP Air Delivery chapter and KC-130 Tactical Pocket Guide. Review MAWTS-1 AD courseware and OPNAV 3710.7\_ altitude requirements.

AD-4700            2.0    365            R    1 KC-130    A    (N)

Goal. Introduce and qualify the Flight Mechanic, or to maintain proficiency for the qualified Flight Mechanic in the duties associated with high altitude environment air delivery.

Requirement. Plan and execute a Military Free Fall (MFF) AD operation. Perform mission analysis and planning of high altitude air delivery of personnel. Perform at least 1 HAHO or 1 HALO AD. Review applicable physiology and oxygen requirements for high altitude AD operations. Emphasize crew and jumpmaster coordination.

Performance Standard. Safely perform an AD that lands within the drop zone safety criteria.

Prerequisite. AD-3700.

External Syllabus Support. Military free fall unit, appropriate DZ control and flight surgeon/physiologist if applicable.

5. Battlefield Illumination (BI)

a. Purpose. To attain and maintain the Mission Plus Skill of Battlefield Illumination (BI). Upon completion of this phase, the Flight Mechanic will be capable of executing BI.

b. Crew Requirements. Shall be instructed by a FE-1 or LMI.

c. Academic/Ground Training. Utilize academic courseware as outlined in the MAWTS-1 course catalog and review MAWTS-1 ASPs, NFM, and KC-130 ANTTP.

BI-4710            2.0    \*            R    1 KC-130    A    N

Goal. Introduce and qualify the Flight Mechanic, or to maintain proficiency for the qualified Flight Mechanic, in the duties and procedures associated with Battlefield Illumination.

Requirement. Emphasize cargo compartment preparation, crew briefing, crew coordination and combat entry/exit checklists. An actual expenditure of ordnance is required.

Performance Standard. Per the NFM and KC-130 ANTTP.

Prerequisite. AD-3700.

Ordnance. 15 LUU-2A/B, B/B or LUU-19 flares as required.

External Syllabus Support. SUAS authorized for aircraft parachute flares and illumination.

511. REQUIREMENTS, QUALIFICATIONS, DESIGNATIONS (RQD) PHASE (6000)

1. General. To provide a vehicle for tracking codes associated with certifications, qualifications and designations. E-coded sorties are evaluation sorties. Once the flight to attain the qualification/designation is complete, a letter from the squadron commanding officer awarding the



qualification/designation shall be placed in the NATOPS jacket before that qualification/designation can be utilized.

## 2. Right Seat Taxi Observer

a. Purpose. To train the Flight Mechanic in right seat taxi observer procedures. This stage does not require flight time, but does require the use of the KC-130T Aircraft for the indicated time.

b. General. A Basic Instructor Pilot or Flight Engineer ANI may instruct the Flight Mechanic for the right seat taxi observer syllabus.

c. Crew Requirements. RQD-6101 shall be evaluated by a Basic Instructor Pilot or a Flight Engineer ANI and a qualified taxi pilot.

d. Academic/Ground Training. IAW NATOPS Flight Manual, 3710.7\_ and local course rules.

RQD-6101      1.0      \*      R   E   1   KC-130   A   (N)

Goal. Evaluate Flight Mechanic on right seat taxi observer procedures.

Requirement. A Basic Instructor Pilot or Flight Engineer ANI will evaluate the Flight Mechanic in right seat taxi observer procedures.

Performance Standard. Qualified per MIMS, NATOPS flight manual, and local course rules.

Prerequisite. NTPS-6116.

## 3. Post Maintenance Functional Check Flight (FCF)

a. Purpose. Functional Check Flight designation.

b. General. Within this stage of training the Flight Mechanic will fly a functional check flight on applicable flight profiles and associated checks IAW check flight conditions, to include a review of normal and emergency procedures during an A, B, C, or D FCF profile. Ensure proficiency in functional check flight procedures.

c. Crew Requirements. Shall be instructed/evaluated by a FEI.

d. Academic/Ground Training. NFM FCF Procedures.

FCF-6106      2.0      365      R   1   KC-130   A   D

Goal. Qualify and maintain proficiency for Flight Mechanics in functional check flight procedures.

Requirement. Be present for an engine run and flight phase inspection upon completion of post maintenance discrepancies. The flight shall include the shutdown and air-start of at least one engine.

Performance Standard. Satisfactorily execute procedures per the NFM, OPNAVINST 3710.7\_, and OPNAVINST 4790.2\_.

Prerequisite. NTPS-6116.

4. Rear Viewing Device (RVD)

a. Purpose. Rear Viewing Device (RVD) instruction.

b. General. Conduct a DT flight using the RVD from the forward escape hatch position. Emphasize lookout doctrine, scan for air threats, terrain clearance, and crew coordination.

(1) This flight may be flown in conjunction with any DT flight.

(2) The following is recommended however not required:

(a) Aircraft having a fully operational ASE suite.

(b) Appropriate chaff and decoy flares loaded prior to flight.

c. Academic/Ground Training. Prior to RVD-6108, the Flight Mechanic shall receive the academic prerequisites per the MAWTS-1 KC-130 Defensive Tactics Course.

RVD-6108	2.0	730	R	1	KC-130	A	D
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Goal. Qualify the Flight Mechanic and maintain proficiency in RVD procedures.

Requirement. Conduct a DT flight using the RVD from the forward escape hatch position. Emphasis will be placed on lookout doctrine, scan for air threats, terrain clearance, and crew coordination.

Performance Standard. Satisfactorily execute procedures per the KC-130 ANTTP, NFM, and OPNAVINST 3710.7\_\_.

Prerequisite. LAT-2260.

Ordinance. 140 flares, 160 chaff.

External Syllabus Support. Single aggressor aircraft and approved airspace. SUAS authorized for expendables.

5. KC-130T NATOPS Evaluation POI

a. Purpose. To evaluate the Flight Mechanic's knowledge of aircraft systems, performance limitations, emergency procedures, and flight and ground operations.

b. General

(1) NATOPS Instructors shall conduct the NATOPS evaluation in accordance with OPNAVINST 3710.7 series and other applicable directives, instructions, and orders.

(2) The NATOPS Instructor shall utilize the NATOPS Model Manager generated NATOPS Aviation Training Form (ATF) and the evaluation metrics required for the accomplishment and performance of the standardized criterion to determine whether the Flight Mechanic completed the sortie. Prior to the

oral examination, the NATOPS Instructor shall review the NATOPS monthly emergency procedures examinations for the previous twelve (12) months and previous NATOPS evaluations. At the discretion of the squadron commanding officer, a letter designating the Flight Mechanic as NATOPS qualified shall be placed in the NATOPS jacket.

(3) NATOPS Evaluatees shall complete and have a graded open book, closed book, and oral examination prior to the commencement of the actual NATOPS evaluation event.

(4) The Flight Mechanic under instruction shall be designated the appropriate level of qualification. A FM-2 is considered systems qualified but requires supervision by a Flight Engineer 1 until successful completion of applicable phase of training.

(5) Once the FM-1 has successfully completed NTPS-6117, he should also log the NTPS-6118 code. Annual FM-1 NATOPS evaluations thereafter only require the logging of the NTPS-6118 code.

c. Crew Requirements. Shall be instructed/evaluated by a Flight Engineer Assistant NATOPS Instructor.

<u>NTPS-6010</u>	<u>3.0</u>	<u>365</u>	<u>R</u>	<u>E</u>	<u>Open Book NATOPS Examination</u>
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Goal. The open book examination shall consist of, but not be limited to the question bank. The purpose of the open book examination is to evaluate the Flight Mechanic's knowledge of the appropriate publications and the aircraft.

Performance Standard. Achieve a minimum score of 3.5 on the open book examination.

<u>NTPS-6011</u>	<u>1.0</u>	<u>365</u>	<u>R</u>	<u>E</u>	<u>Closed Book NATOPS Examination</u>
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Goal. The purpose of the closed book examination is to evaluate the Flight Mechanic's knowledge of the concerning normal/emergency procedures and aircraft limitations.

Performance Standard. Achieve a minimum score of 3.3 on the closed book examination.

<u>NTPS-6012</u>	<u>3.0</u>	<u>365</u>	<u>R</u>	<u>E</u>	<u>Oral NATOPS Examination</u>
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Goal. The oral examination shall consist of, but not be limited to the question bank. The instructor may draw upon their experience to propose questions of a direct and positive manner and in no way be opinionated to evaluate the Flight Mechanic's knowledge of the concerning normal/emergency procedures, aircraft limitations, and performance.

Performance Standard. Achieve a minimum grade of qualified on the oral examination.

<u>NTPS-6116</u>	<u>4.0</u>	<u>365</u>	<u>R</u>	<u>E</u>	<u>1 KC-130 A (N)</u>
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Goal. FM-2 NATOPS evaluation.

Requirement. A NATOPS Instructor will evaluate the student Flight Mechanic per NATOPS. Remain overnight (RON) flight is preferred.

Performance Standard. Student Flight Mechanic shall perform responsibilities/duties IAW the NATOPS flight manual, 3710.7\_, 4790.2\_ and associated MIMS.

Prerequisite. NTPS-6010, NTPS-6011, NTPS-6012, Core Skill Introduction Phase complete.

NTPS-6117	4.0	*	R	E	1	KC-130	A	(N)
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Goal. FM-1 NATOPS initial evaluation.

Requirement. A NATOPS Instructor will evaluate the Flight Mechanic per NATOPS. Remain overnight (RON) flight is preferred. The NATOPS evaluation should be either an AAR, AD, TN, ALZ, RGR, or combination mission. RON flight is preferred.

Performance Standard. Flight Mechanic under instruction shall perform responsibilities/duties IAW the NATOPS flight manual, KC-130 ANTTP, 3710.7, 4790.2 and associated MIMS.

Prerequisite. NTPS-6010, NTPS-6011, NTPS-6012, NTPS-6116, Core Skill and Mission Skill Phase complete.

NTPS-6118	4.0	365	R	E	1	KC-130	A	(N)
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Goal. Annual FM-1 NATOPS evaluation.

Requirement. A NATOPS Instructor will evaluate the Flight Mechanic per NATOPS. RON flight is preferred. The NATOPS evaluation should be either an AAR, AD, TN, ALZ, RGR, or combination mission.

Performance Standard. Flight Mechanic under evaluation shall perform responsibilities/duties IAW the NATOPS flight manual, KC-130 ANTTP, 3710.7, 4790.2 and associated MIMS.

Prerequisite. NTPS-6010, NTPS-6011, NTPS-6012, NTPS-6116, NTPS-6117.

512. T&R SYLLABUS MATRIX

KC-130T FLIGHT MECHANIC														
1000 CORE SKILL INTRODUCTION PHASE														
STAGE	TRNG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
KC FAMILIARIZATION														
FAM	1000	4.0		*	R		A	1		(N)	G/S	PRE FLT INTRO		000
FAM	1100	4.0		*	R		A	1		(N)	1000	PRE FLT		100
FAM	1101	4.0		*	R		A	1		(N)	1100	ENG SYS		101
FAM	1102	4.0		*	R		A	1		(N)	1100	PROP SYS		102
FAM	1103	4.0		*	R		A	1		(N)	1100	AC/DC SYS		103
FAM	1104	4.0		*	R		A	1		(N)	1100	BLD AIR		104
FAM	1105	4.0		*	R		A	1		(N)	1100	FUEL SYS		105
FAM	1106	4.0		*	R		A	1		(N)	1100	HYD SYS		106
FAM	1107	4.0		*	R		A	1		(N)	1100	AIR CON/O2		107
FAM	1108	4.0		*	R		A	1		(N)	1100	COM NAV		108
FAM	1109	4.0		*	R		A	1		(N)	1100	FWAAR		109
FAM	1110	4.0		*	R		A	1		(N)	1109	HAAR		110
FAM	1111	4.0		*	R		A	1		(N)	1110	AAR EVAL		111
FAM	1112	4.0		*	R		A	1		(N)	1100	LOW LEVEL		112
FAM	1113	4.0		*	R		A	1		(N)	1100- 1112	PRE CHECK		113
		60.0												
PHASE TOTALS														
		60.0												

KC-130T FLIGHT MECHANIC														
2000 CORE SKILL PHASE														
STAGE	TRNG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
FAM														
FAM	2000	2.0		90	R		A	1		(N)	6116	FAM		200
		2.0												
NIGHT SYSTEMS (NS)														
NS	2150	2.0		365	R		A	1		NS	2000	HLL NSFAM	2000	204
NS	2151	2.0		180	R		A	1		NS	2150	LLL NSFAM	2150,2000	205
		4.0												
LONG RANGE NAVIGATION (LRN)														
LRN	2160	8.0		365	R		A	1		(N)	2000	LRNAV	2000	250
		8.0												
TACTICAL NAVIGATION (TN)														
TN	2200	2.0		365	R		A	1		D	2000	DAY TN	2000	220
TN	2250	2.0		365	R		A	1		NS	2150, 2200	HLL TN	2000,2150, 2200	223
TN	2251	2.0		180	R		A	1		NS	2151, 2250	LLL TN	2200,2250, 2151,2150, 2000	224
		6.0												
LOW ALTITUDE TACTICS (LAT)														
LAT	2260	2.0		180	R		A	1		D	2200	LAT	2000,2200	321
		2.0												
FORMATION (FORM)														
FORM	2300	2.0		365	R		A	2		(NS)	2000	FORM	2000	231
		2.0												
THREAT REACTION (TR)														
TR	2400	2.0		365	R		A/S	1		(NS)	2260	IR TR	2000	361
		2.0												
PHASE TOTALS														
		26.0												

KC-130T FLIGHT MECHANIC														
3000 MISSION SKILL PHASE														
STAGE	TRNG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
ASSAULT LANDING ZONE (ALZ)														
ALZ	3500	2.0		365	R		A	1		D	2000	DAY ALZ	2000	271
ALZ	3550	2.0		365	R		A	1		NS	2151, 3500	NVD ALZ	2000, 3500, (2150 IF HLL) (2151 IF LLL)	272
		4.0												
AIR-TO-AIR REFUELING (AAR)														
AAR	3600	3.0		365	R		A	1		(N)	2000	FWAAR/ TRAAR	2000	210
AAR	3601	3.0		365	R		A	1		D	2000	DAY HAAR	2000	212
AAR	3650	3.0		365	R		A	1		NS	3601, (2150HLL) (2151LLL)	NVD HAAR	3601, 2000, (2150 IF HLL) (2151 IF LLL)	213
		9.0												
RAPID GROUND REFUELING (RGR)														
RGR	3660	0.0		365	R		A	1		(N)	2000	RGR	2000, (2150 IF HLL) (2151 IF LLL)	274
		0.0												
AIR DELIVERY (AD)														
AD	3700	2.0		365	R		A	1		D	2000	DAY AD	2000	241
AD	3750	2.0		365	R		A	1		NS	3700, (2150HLL) (2151LLL)	NS AD	3700, 2000, (2150HLL), (2151LLL)	242
		4.0												
PHASE TOTALS														
		17.0												

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KC-130T FLIGHT MECHANIC														
4000 CORE PLUS SKILLS PHASE														
STAGE	TRNG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
THREAT REACTION (TR)														
TR	4400	2.0		365	R		A/S	1		(NS)	2260	RF TR	2000	360
		2.0												
DEFENSIVE TACTICS (DT)														
DT	4410	2.0		365	R		A	1		D	2260	DT	2000, 2200, 2260	461
		2.0												
AIR DELIVERY (AD)														
AD	4700	2.0		365	R		A	1		(N)	3700	HALO, HAHO	2000, (2150HLL), (2151LLL)	442
		2.0												
BATTLEFIELD ILLUMINATION (BI)														
BI	4710	2.0		*	R		A	1		N	3700	BI	2000, 3700 (2150HLL) (2151LLL) (3750 IF NS)	444
		2.0												
PHASE TOTALS														
		8.0												



KC-130T FLIGHT MECHANIC														
6000 REQUIREMENTS / QUALIFICATIONS / DESIGNATIONS PHASE														
STAGE	TRNG CODE	FLIGHT HOURS	SIM HOURS	REFLY INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
RIGHT SEAT TAXI OBSERVER														
RSTO	6101	1.0		*	R	E	A	1		(N)	6116	TAXI OBS		
POST MAINTENANCE FUNCTIONAL CHECK FLIGHT (FCF)														
FCF	6106	2.0		365	R		A	1		D	6116	FCF DES	2000	
		2.0												
REAR VIEWING DEVICE (RVD)														
RVD	6108	2.0		730	R		A	1		D	2260	RVD		605
		2.0												
NATOPS (NTPS)														
NTPS	6010			365	R	E						OPEN BK		
NTPS	6011			365	R	E						CLSD BK		
NTPS	6012			365	R	E						ORAL EX		
NTPS	6116	4.0		365	R	E	A	1		(N)	1000 PHASE COMPLETE, 6010,6011, 6012	FM-2 CK & DESIG		680
NTPS	6117	4.0		*	R	E	A	1		(N)	2000/3000 PHASE COM, 6010,6011, 6012,6116	FM-1 CK & DESIG	2000, 6116	681
NTPS	6118	4.0		365	R	E	A	1		(N)	6010,6011, 6012,6116, 6117	ANNUAL NATOPS	2000, 6116, 6117	682
		12.0												
PHASE TOTALS														
		17.0												

513. SYLLABUS EVALUATION FORMS. Contact MAWTS-1 to receive FM T&R syllabus evaluation forms.

CHAPTER 6

KC-130T LOADMASTER (MOS 7382)

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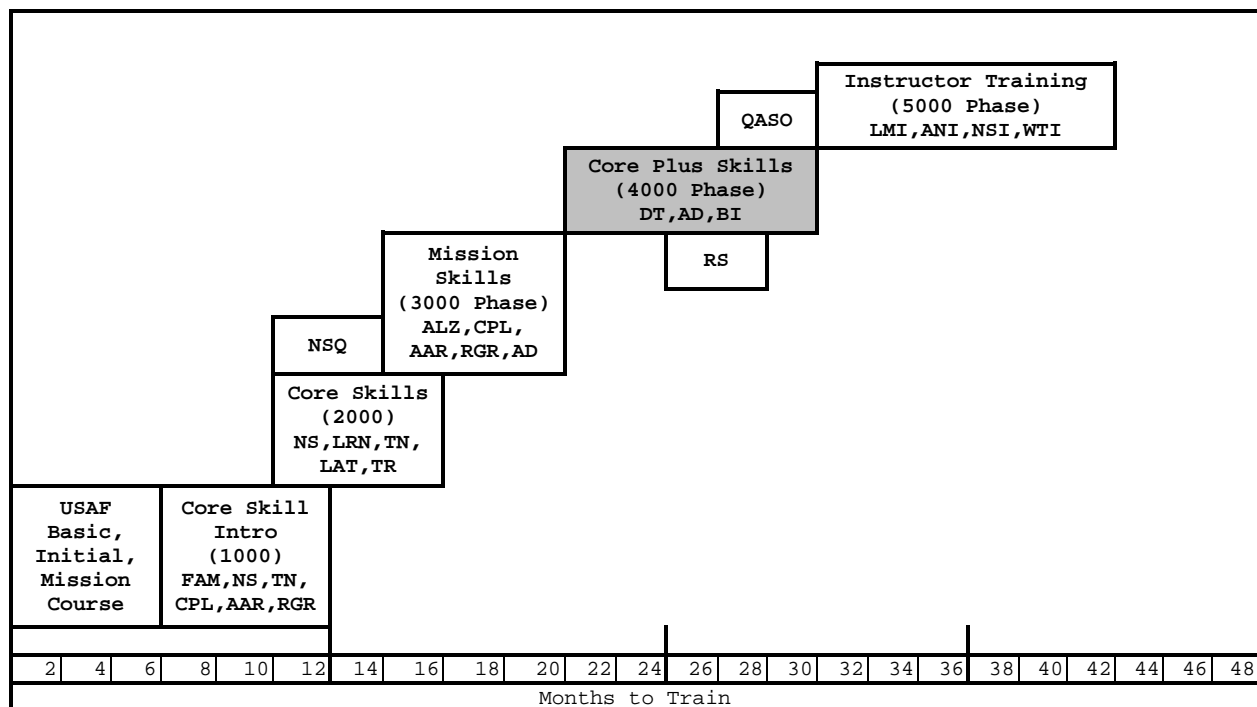
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## CHAPTER 6

### KC-130T LOADMASTER MOS 7382

600. KC-130T LOADMASTER/7382 INDIVIDUAL TRAINING AND READINESS REQUIREMENTS. This T&R syllabus is based on specific goals and performance standards designed to ensure individual proficiency in Core and Mission Skills. The goal of this chapter is to develop individual and unit warfighting capabilities.

601. KC-130T LOADMASTER TRAINING PROGRESSION MODEL. This model represents the recommended training progression for the average KC-130T Loadmaster. Units should use the model as a point of departure to generate individual training plans.



602. INDIVIDUAL CORE SKILL PROFICIENCY (CSP) REQUIREMENTS. A CSP crew consists of individuals representing each crew position who have achieved and currently maintain individual CSP. In order to be considered proficient in a Core Skill, an individual must attain and maintain proficiency in Core Skill events as delineated in the below paragraphs.

1. Events Required to Attain Individual CSP. To initially attain CSP in a Core Skill, an individual must simultaneously have a proficient status in all 2000 phase T&R events listed for that Core Skill:

INDIVIDUAL CORE SKILL PROFICIENCY (CSP) ATTAIN TABLE				
T&R events required to Attain CSP (2000 Phase)				
NS	LRN	TN	LAT	TR
2150R	2160R	2200	2260R	2400R
		2250R		

Gray highlight & an R suffix on the event code = Refresher POI

2. Events Required to Maintain Individual CSP. To maintain CSP in a Core Skill, an individual must maintain proficiency in all 2000 phase T&R events listed for that Core Skill:

INDIVIDUAL CORE SKILL PROFICIENCY (CSP) MAINTAIN TABLE				
T&R events required to Maintain CSP (2000 Phase)				
NS	LRN	TN	LAT	TR
2150R	2160R	2250R	2260R	2400R
Gray highlight & an R suffix on the event code = Refresher POI				

603. INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) REQUIREMENTS. A MSP crew consists of individuals representing each crew position who have achieved and currently maintain individual MSP. To be considered proficient in a Mission Skill, an individual must attain and maintain proficiency in Mission Skill events as delineated in the below paragraphs.

1. Events Required to Attain Individual MSP. To initially attain MSP in a Mission Skill, an individual must simultaneously have a proficient status in all 3000 phase T&R events listed for that Mission Skill:

INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) ATTAIN TABLE				
T&R events required to Attain MSP (3000 Phase)				
ALZ	CPL	AAR	RGR	AD
3500R	3510R	3600	3660	3700R
3501R	3511R	3601	3651R	3701R
	3512R	3650R		3702R
Gray highlight & an R suffix on the event code = Refresher POI				

2. Events Required to Maintain Individual MSP. To maintain MSP in a Mission Skill, an individual must maintain proficiency in all 3000 phase T&R events listed for that Mission Skill:

INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) MAINTAIN TABLE				
T&R events required to Maintain MSP (3000 Phase)				
ALZ	CPL	AAR	RGR	AD
3500R	3510R	3650R	3651R	3700R
3501R	3511R			3701R
	3512R			3702R
Gray highlight & an R suffix on the event code = Refresher POI				

3. Events Required to Attain Individual Proficiency in Core Plus / Mission Plus Skills. Proficiency in Core Plus Skills is not required to obtain unit CSP. Training to Core Plus Skills is at the discretion of the unit commanding officer. To initially attain proficiency in a Core Plus Skill, an individual must simultaneously have a proficient status in all T&R events listed for that Core Plus Skill:

INDIVIDUAL CORE PLUS SKILL ATTAIN TABLE		
T&R events required to Attain Core Plus Skill (4000 Phase)		
CORE PLUS SKILLS		MISSION PLUS
DT	AD	BI
4410R	4700R	4710R
	4701R	
Gray highlight & an R suffix on the event code = Refresher POI		

4. Events Required to Maintain Individual Proficiency in Core Plus / Mission Plus Skills. To maintain proficiency in a Core Plus Skill, an individual must maintain proficiency in all T&R events listed in the table below for that Core Plus Skill:

INDIVIDUAL CORE PLUS SKILL MAINTAIN TABLE		
T&R events required to Maintain Core Plus Skill (4000 Phase)		
CORE PLUS SKILLS		MISSION PLUS
DT	AD	BI
4410R	4700R	4710R
	4701R	
Gray highlight & an R suffix on the event code = Refresher POI		

604. REQUIREMENTS, QUALIFICATION AND DESIGNATION TABLES. The tables below delineate T&R events required to be completed to attain proficiency, and initial qualifications and designations. In addition to event requirements, all required stage lectures, briefs, squadron training, prerequisites, and other criteria shall be completed prior to completing final events. Qualification and designation letters signed by the commanding officer shall be placed in the individual's NATOPS jacket. Loss of proficiency in all qualification events causes the associated qualification to be lost. Regaining a qualification requires completing all R-coded syllabus events associated with that qualification.

INDIVIDUAL QUALIFICATION REQUIREMENTS	
Qualification	Event Requirements
NSQ	NS-1150, NS-1151, NS-2150R, 10 hours total NVD time (minimum 5 hours LLL).

INDIVIDUAL DESIGNATION REQUIREMENTS	
Designation	Event Requirements
ANNUAL NATOPS	NTPS-6118.
DAY RS	RGR-3660, RGR-3651, RS-6660.
NS RS	RGR-3660, RGR-3651, RS-6660, RS-6650.
QASO	BI-4710, QASO-6710.
LOADMASTER INSTRUCTOR (LMI)	LMI-5100, LMI-5101, LMI-5102. 750 Flight Hours as qualified Loadmaster. The IUT should be complete with all 2000 and 3000 phase sorties prior to beginning IUT syllabus.
ASSISTANT NATOPS INSTRUCTOR (ANI)	NI-5140, NI-5141. 1500 Flight Hours as qualified Loadmaster. Certification by the Squadron NATOPS Instructor or NATOPS Evaluator and a designation letter signed by the squadron commanding officer.
NATOPS INSTRUCTOR/EVALUATOR (NI/GNE)	NI-5140, NI-5141. 1500 Flight Hours as qualified Loadmaster. NI shall be instructed by the GNE or Model Manager. GNE shall be instructed by the Model Manager. GNE is designated by the MAG commanding officer.
NSI	NSI-5150, NSI-5151, NSI-5152. IAW the MAWTS-1 Course Catalog.
WTI	WTI-5999. IAW the MAWTS-1 Course Catalog.

#### 605. PROGRAMS OF INSTRUCTION (POI)

1. General. The time required to train a KC-130T Loadmaster to completion of the Core Plus phase will vary depending on previous Loadmaster's experience.

Basic (B) and Transition (T) Loadmasters shall fly the entire syllabus. Refresher Loadmasters represent a varying background and should fly flights coded with an (R). All KC-130J Loadmasters shall fly the SC syllabus. Commanding officers will review the qualifications, previous experience, and demonstrated ability of previously qualified KC-130 Loadmasters with a view towards waiving and/or combining required flights on a case by case basis. When a crewmember completes a stage of training, they need to only maintain proficiency in the R coded events for that stage to remain proficient.

2. Basic/Transition (B/T) POI. Basic (B) and Transition (T) Loadmasters shall fly the entire syllabus.

WEEKS	COURSE	PERFORMING ACTIVITY
1-6	Naval Aircrew Candidate Course (N2373C2)	MATSG-90
7-11	USAF Basic Loadmaster Course	LRAFB
12-18	USAF Loadmaster Initial Course	LRAFB
19-25	USAF Loadmaster Mission Course	LRAFB
26-28	Survival, Evasion, Resistance, and Escape	NAS North Island NAS Brunswick
29-43	Core Skill Introduction Training	Tactical Squadron
44-60	Core Skill Training	Tactical Squadron
61-80	Mission Skill Training	Tactical Squadron
81-120	Core Skill Plus Training	Tactical Squadron

3. Series Conversion (SC) POI. All KC-130J Series Conversion (SC) Loadmasters shall fly the SC syllabus.

WEEKS	COURSE	PERFORMING ACTIVITY
1-7	Ground School	Tactical Squadron
8-15	Core Skill Introduction Training	Tactical Squadron
16-36	Core Skill Training	Tactical Squadron
37-56	Mission Skill Training	Tactical Squadron
57-97	Core Skill Plus Training	Tactical Squadron

4. Modified Refresher/Refresher (MR/R) POI. The MR POI mirrors the R POI. Refresher Loadmasters represent a varying background and should fly flights coded with an (R). Commanding officers will review the qualifications, previous experience, currency, and demonstrated ability of Refresher Loadmasters with a view towards waiving and/or combining required flights.

WEEKS	COURSE	PERFORMING ACTIVITY
1-2	Refresher Ground School	Tactical Squadron
3-8	Core Skill Introduction Training	Tactical Squadron
9-25	Core Skill Training	Tactical Squadron
26-45	Mission Skill Training	Tactical Squadron
46-86	Core Skill Plus Training	Tactical Squadron

5. Instructor Pilot POI

WEEKS	COURSE	PERFORMING ACTIVITY
1	Standardization Training	Tactical Squadron
2-4	Flight Training	Tactical Squadron

606. ACADEMIC TRAINING

1. Academic training shall be conducted for each phase/stage of the syllabus. Where indicated, standardized academic training materials exist and may be obtained from the sponsoring activity.
2. External academic courses of instruction available to complete the syllabus are listed below:

COURSE	ACTIVITY
Naval Aircrew Candidate School (NACCAS)	NAS Pensacola, FL
Survival, Evasion, Resistance, and Escape (SERE) Course	NAS Brunswick ME NAS North Island CA
NITE lab	Tactical Squadron
Weapons and Tactics Instructor (WTI)	MAWTS-1
Defensive Tactics (Ground) (DTG)	MAWTS-1/Tactical Squadron
Defensive Tactics (Air) (DTA)	MAWTS-1/Tactical Squadron
Environmental Survival Courses	Regional/Seasonal Survival Schools
Joint Airdrop Inspector Course	Ft Lee Va./Tiger Team
Advanced Airlift Tactics Training Course (AATTC)	AATTC, St. Joseph MO

607. CORE SKILL INTRODUCTION PHASE (1000)

1. General. The focus of the Core Skill Introduction Phase is to train the Loadmaster in duties involving Familiarization (FAM), Night Systems (NS), Tactical Navigation (TN), Cargo and Passenger Loading (CPL), Air-to-Air Refueling (AAR), and Rapid Ground Refueling (RGR).

a. The Core Skill Introduction FRS academic phase will be completed in conjunction with the USAF Basic Loadmaster Course, Loadmaster Initial Course, and Loadmaster Mission Qualification Course at Little Rock AFB.

b. Students shall attend the NITE Laboratory training within this phase.

c. The Loadmaster will also be trained and capable of basic duties to include normal, emergency procedures, and CRM.

2. Familiarization (FAM)

a. Purpose. Train the student to perform the basic NATOPS flight crew requirements, cargo compartment preflight preparation, systems operation, location and use of emergency equipment, ground and in-flight emergency procedures, and aircraft post flight procedures. Instruction will be provided to the student demonstrating the location and conduct of the aircrew mission brief, the proper filing of the weight and balance form (DD Form 365-4), and galley preparations for a flight.

b. General. Upon completion of this phase of training the Loadmaster Under Instruction (LMUI) will possess a general understanding of squadron and aircraft operations to include emergency procedures.

c. Crew Requirements. Shall be instructed by a Loadmaster Instructor.



d. Academic Training. Prior to FAM-1100, complete ground school courses consisting of basic aircraft systems descriptions, cockpit resource management, basic weight and balance, aircraft pre-flight and post-flight procedures, normal and emergency procedures to include donning and use of all emergency equipment. Utilize academic courseware as outlined in the KC-130 MAWTS-1 Course Catalog.

FAM-1100	4.0	*	SC,R	1 KC-130	A	D
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Goal. Introduce the Loadmaster student to hazard areas, emergency signals, ground evacuation, cargo compartment preflight, post-flight, and normal and emergency procedures per current instructions. This event will also include the squadron familiarization for the student.

Requirement. The student will be given detailed instruction on the squadron SOP, location of maintenance control and the ready room, and hazard area locations. The instructor will demonstrate and discuss a full cargo compartment preflight and post-flight inspection, emergency signals, and ground evacuation.

Performance Standard. Satisfactory completion of procedures per the NFM, Squadron SOP, and NAVAIR 01-75GAA-9.

FAM-1101	4.0	*	SC,R	1 KC-130	A	D
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Goal. Introduce ramp and door manual extension, in-flight door warning, rapid decompression, fire/smoke and fume elimination, landing gear emergencies, and manual flap extension. Practice aircraft preflight, post-flight, normal and emergency procedures per current instructions.

Requirement. The student, under the direct supervision of the instructor, will conduct a preflight and post-flight inspection with emphasis on internal preflight. The student will also be given detailed instruction on ramp and door manual extension, in-flight door open warning, rapid decompression, fire/smoke and fume elimination, landing gear emergencies, and manual flap extension emergency procedures

Performance Standard. Satisfactory completion of procedures per the NFM, Squadron SOP, and NAVAIR 01-75GAA-9.

Prerequisite. FAM-1100.

FAM-1102	4.0	*	SC,R	1 KC-130	A	D
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Goal. Introduce detailed instruction on HF communication equipment operation, procedures, relaying agencies, frequency selection, responsibilities during overwater flights, cargo compartment emergency equipment, ditching, and bailout procedures. Practice aircraft preflight, post-flight, normal and emergency procedures per current instructions.

Requirement. The student, under the direct supervision of an instructor will conduct a full aircraft preflight and post-flight

inspection with emphasis on power on checklist, operational check of all HF communication equipment, enroute position reports, position report revisions, clearance copying, preparation of distress signal, preparation of all flight related documentation, and cargo compartment preflight procedures. The student will also be given detailed instruction on lost communication procedures, ditching duties involving passengers, cargo compartment emergency equipment, ditching, and bailout emergency procedures. The student will prepare a complete DD Form 365-4.

Performance Standard. Satisfactory completion of procedures per the NFM, Squadron SOP, and NAVAIR 01-75GAA-9.

Prerequisite. FAM-1101.

FAM-1103	4.0	*	SC,R	1 KC-130	A	D
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Goal. Continue instruction on HF communication equipment operation, procedures, relaying agencies, frequency selection, responsibilities during overwater flights, cargo compartment emergency equipment, ditching, and bailout procedures. Practice aircraft preflight, post-flight, normal and emergency procedures per current instructions.

Requirement. The student, under the direct supervision of an instructor will conduct a full aircraft preflight and post-flight inspection with emphasis on power on checklist, operational check of all HF communication equipment, enroute position reports, position report revisions, clearance copying, preparation of distress signal, preparation of all flight related documentation, and cargo compartment preflight procedures. The student will also be given detailed instruction on lost communication procedures, ditching duties involving passengers, cargo compartment emergency equipment, ditching, and bailout emergency procedures. The student will prepare a complete DD Form 365-4.

Performance Standard. Satisfactory completion of procedures per the NFM, Squadron SOP, and NAVAIR 01-75GAA-9.

Prerequisite. FAM-1102.

FAM-1104	4.0	*	SC,R	1 KC-130	A	D
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Goal. Continue instruction on standard NATOPS procedures, SOP, duties and responsibilities during normal operations to include aircraft preflight, post-flight, normal and emergency procedures per current instructions. Conduct of these duties in-flight should be the emphasis.

Requirement. The student, under the direct supervision of a qualified instructor, will conduct aircraft preflight and post-flight inspection. The student will demonstrate a thorough knowledge of hazard areas, emergency signals, and ground evacuation. The student will prepare a complete DD Form 365-4.

Performance Standard. Satisfactory completion of procedures per the NFM, Squadron SOP, and NAVAIR 01-75GAA-9.

Prerequisite. FAM-1103.

FAM-1105	4.0	*	SC,R	1 KC-130	A	D
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Goal. Continue instruction on standard NATOPS procedures, duties and responsibilities during normal operations to include aircraft preflight, post-flight, normal and emergency procedures per current instructions. Emphasize conduct of these duties in-flight.

Requirement. The student, under the direct supervision of a qualified instructor, will conduct aircraft preflight and post-flight inspection. The student will demonstrate a thorough knowledge of ramp and door manual extension, in-flight door open warning, rapid decompression, emergency flap and gear extension, and fire/smoke and fume elimination emergency procedures. The student will prepare a complete DD Form 365-4 and enter the data into the CNI-MU.

Performance Standard. Satisfactory completion of procedures per the NFM, Squadron SOP, and NAVAIR 01-75GAA-9.

Prerequisite. FAM-1104.

FAM-1106	4.0	*	SC,R	1 KC-130	A	D
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Goal. Continue instruction on standard NATOPS procedures, duties and responsibilities during normal operations to include aircraft preflight, post-flight, normal and emergency procedures per current instructions. Emphasize conduct of these duties in-flight.

Requirement. The student, under the direct supervision of a qualified instructor, will conduct aircraft preflight and post-flight inspection. The student will also demonstrate a thorough knowledge of HF communication equipment, cargo compartment emergency equipment, ditching, and bailout emergency procedures. The student will prepare a complete DD Form 365-4 and perform duties on HF communication equipment.

Performance Standard. Satisfactory completion of procedures per the NFM, and NAVAIR 01-75GAA-9.

Prerequisite. FAM-1105.

### 3. Night Systems (NS)

a. Purpose. To train the Loadmaster in NS and perform crew duties using NVDs during High Light Level (HLL) and Low Light Level (LLL) conditions.

b. General. The NSQ qualification syllabus consists of NS-1150, NS-1151, NS-2150 and requires 10 hours of total NVD time with at least 5 hours of Low Light Level (LLL) time. The initial 10 hours shall be flown in the aircraft.

c. Crew Requirements. Loadmasters conducting initial and refresher Night Systems (NS) training shall be instructed by an NSI.

d. Academic/Ground Training. MAWTS-1 KC-130 NVD 1 and 2 Academic Support Package (ASP) courses and NITE lab.

NS-1150	2.0	*	1 KC-130	A	NS
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Goal. Introduce the Loadmaster to NVD operations under HLL conditions.

Requirement. The instructor will discuss aircraft preflight with NVD considerations taken into account. Student will preflight the aircraft and be given an exterior lighting demonstration with NVDs. The student will be introduced to aft lookout duties for NVD missions. Emphasize aircraft lighting in normal, NVIS, and variations that occur with different terrain/water, cultural lighting and contrast under high light conditions. Mission must be flown IAW Aviation T&R Program manual high light level standards.

Performance Standard. The Loadmaster shall demonstrate the ability to properly pre-flight and don NVDs, diagnose NVD emergencies and apply corrective action, understand capabilities and limitations of NVDs under HLL conditions.

Prerequisite. FAM-1101.

NS-1151	3.0	*	1 KC-130	A	NS
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Goal. Introduce Loadmaster to NVD operations under LLL conditions.

Requirement. The instructor will discuss aircraft preflight with NVD considerations taken into account. Student will preflight the aircraft and be given an exterior lighting demonstration with NVDs. The student will be introduced to aft lookout duties for NVD missions. Emphasize aircraft lighting in normal, NVIS, and variations that occur with different terrain/water, cultural lighting and contrast under low light conditions. Mission must be flown IAW Aviation T&R Program manual low light level standards.

Performance Standard. The Loadmaster shall demonstrate the ability to properly pre-flight and don NVDs, diagnose NVD emergencies and apply corrective action, understand capabilities and limitations of NVDs under LLL conditions.

Prerequisite. NS-1150.

#### 4. Tactical Navigation (TN)

a. Purpose. Introduce the Loadmaster to the skills and duties of aft lookout doctrine in the tactical navigation environment.

b. General. The student will demonstrate threat recognition, and hazards associated with tactical navigation regime.

c. Crew Requirements. Shall be instructed by a Loadmaster Instructor.

d. Academic/Ground Training. Utilize academic courseware as outlined in the appropriate Type/Model/Series chapter of the MAWTS-1 Course Catalog.

TN-1200	2.0	*	1 KC-130	A	D
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Goal. Introduce the student to the duties of an aft lookout during day tactical navigation mission.

Requirement. The student will perform the duties of an aft lookout during a day tactical navigation mission. Emphasize cargo compartment preparation, crew briefing, lookout doctrine, scan for threats and terrain clearance, crew coordination and combat entry/exit checklists.

Performance Standard. Satisfactory completion of procedures per the NFM and KC-130 ANTP.

Prerequisite. FAM-1101.

External Syllabus Support. Military Training Route.

#### 5. Cargo and Passenger Loading (CPL)

a. Purpose. Refresh the student in cargo and passenger loading.

b. General. A load simulator is the preferred training device for this stage. A KC-130T aircraft may be used as a substitute. At the end of this phase of instruction the student will be familiar with cargo/passenger loading techniques, such as:

(1) Preflight and configuration of an aircraft per mission requirements for flights involving passengers and/or cargo.

(2) Determine available seating and/or cargo space for load planning purposes.

(3) Utilize all KC-130 loading aids conforming to the limitations, installations, and usage of each per NAVAIR 01-75GAA-9.

(4) Safely load and off-load cargo per NAVAIR 01-75GAA-9.

(5) Compute weight and balance for a simulated flight transporting a passenger/cargo payload.

(6) Postflight aircraft and perform minor repairs as necessary to return cargo compartment to full operational readiness.

c. Crew Requirements. Shall be instructed by a Loadmaster Instructor.

CPL-1500	4.0	*	1 LST	S/A	D
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Goal. Instruct the student Loadmaster in loading passengers, baggage, and rolling stock on all aircraft configurations.

Requirement. The instructor will discuss and demonstrate aircraft configuration for a flight transporting the maximum permitted number of passengers and baggage and rolling stock on a cargo

frame, as well as maximum loads for overland and overwater flights, maximum ramp loads, winch limitations, baggage staging & handling, loading & tie down procedures, passenger brief and accurate passenger manifesting. The student will demonstrate the installation of centerline & sidewall seats, seat spacing configuration, as well as a partial setup of litters. The student will prepare a DD Form 365-4. In-flight cargo jettison procedures will be thoroughly discussed.

Performance Standard. Satisfactory completion of procedures per the NFM, and NAVAIR 01-75GAA-9, OPNAVINST 3710.7\_ and Sqdn SOP.

Prerequisite. FAM-1101.

External Syllabus Support. External Embarkation Support.

CPL-1501	4.0	*	1 LST	S/A	D
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Goal. Instruct the student Loadmaster regarding general procedures for loading palletized cargo on all aircraft configurations.

Requirement. The instructor will discuss and demonstrate aircraft configuration for a flight transporting palletized cargo. Special emphasis will be placed on tanker considerations, preflight inspection & operation of the dual rail system, and utilization of a forklift as the primary loading vehicle. The student will prepare a DD Form 365-4. In-flight cargo jettison procedures will be thoroughly discussed.

Performance Standard. Satisfactory completion of procedures per the NFM, and NAVAIR 01-75GAA-9, OPNAVINST 3710.7\_ and Sqdn SOP.

Prerequisite. FAM-1101.

External Syllabus Support. External Embarkation Support.

CPL-1502	4.0	*	1 LST	S/A	D
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Goal. Introduce the Loadmaster to loading hazardous cargo.

Requirement. The student, under the direct supervision of a qualified instructor, will configure an aircraft for a flight transporting hazardous cargo. The student will be introduced to Shippers Declaration forms and the MCO P4030.19\_. Special emphasis will be placed on use of the HazMat manual.

Performance Standard. Satisfactory completion of procedures per the NFM, and NAVAIR 01-75GAA-9, OPNAVINST 3710.7, and squadron SOP.

Prerequisite. FAM-1101.

External Syllabus Support. External Embarkation Support.

CPL-1503	3.0	*	1 KC-130	A	D
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Goal. Introduce and review loading of passengers with bags and rolling stock.

Requirement. The student, under the direct supervision of a qualified instructor, will configure an aircraft equipped with dual rails for a flight transporting passengers and rolling stock. Special emphasis will be placed on preflight inspection and operation of the winch. The student will perform a proper NATOPS passenger brief. The student will prepare a DD Form 365-4. In-flight cargo jettison procedures will be thoroughly explained by the student.

Performance Standard. Upon completion of this training, the student will be able to plan, load, and configure an aircraft for passengers with bags and rolling stock per the NFM, Cargo Loading Manual, OPNAVINST 3710 and squadron SOP.

Prerequisite. CPL-1500.

External Syllabus Support. External Embarkation Support.

CPL-1504	3.0	*	1 KC-130	A	D
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Goal. Introduce and review loading of palletized cargo.

Requirement. The student will demonstrate aircraft configuration for a flight transporting palletized cargo. Special emphasis will be placed on tanker considerations, preflight inspection & operation of the dual rail system. A forklift will be used as the primary loading vehicle. The student will prepare a DD Form 365-4. In-flight cargo jettison procedures will be thoroughly explained by the student.

Performance Standard. Upon completion of this training, the student will be able to plan, load, and configure an aircraft for palletized cargo per the NFM, Cargo Loading Manual, OPNAVINST 3710 and squadron SOP.

Prerequisite. CPL-1501.

External Syllabus Support. External Embarkation Support.

CPL-1505	3.0	*	1 KC-130	A	D
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Goal. Introduce and review loading hazardous cargo.

Requirement. The instructor will demonstrate aircraft configuration for a flight transporting hazardous cargo. Emphasize the considerations involved in preparing aircraft and gear for transportation of hazardous cargo. Ground evacuation and cargo jettison will be thoroughly reviewed taking into account hazardous material considerations. The student will prepare a DD Form 365-4.

Performance Standard. Upon completion of this training, the student will be able to plan, load, and configure an aircraft for hazardous cargo per the NFM, Cargo Loading Manual, OPNAVINST 3710 and squadron SOP.

Prerequisite. CPL-1502.

External Syllabus Support. External Embarkation Support.

6. Air-to-Air Refueling (AAR)

a. Purpose. Familiarize Loadmasters with basic Air-to-Air Refueling (AAR) procedures and terminology.

b. General. Train the student to perform the duties of an in-flight refueling observer. At the end of this phase of training the student will be able to:

(1) Preflight the aircraft per specific mission requirements.

(2) Compute and file an accurate weight and balance form for the aircraft.

(3) Perform duties as an in-flight refueling observer during hose checks, correctly identifying the status of the system's operation, and communicating this status with the crew.

(4) Perform duties as an in-flight refueling observer during refueling operations, correctly informing the Plane Commander of the status of the refueling system and receiver aircraft.

(5) Keep accurate records of the refueling evolution.

(6) Correctly perform all related emergency procedures.

c. Crew Requirements. Shall be instructed by a Loadmaster Instructor.

d. Academic/Ground Training

(1) ATP-56B NATO Air-to-Air Refueling Manual.

(2) In-flight refueling system.

(3) KC-130 ANTP.

AAR-1600	2.0	*	1 KC-130	A	D
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Goal. Introduce the student to the duties of an in-flight refueling observer during a day fixed-wing or tilt rotor air to air refueling mission.

Requirement. The student, under the direct supervision of a qualified instructor, will complete and file a DD Form 365-4, conduct an aircraft preflight and perform refueling observer duties during a day AAR refueling mission. The student will keep separate records for comparison at the end of the flight. This flight should involve refueling multiple aircraft. The student should observe from both sides of the aircraft and respond to all



ICS and radio transmissions during the entire evolution. The student will demonstrate a thorough understanding of all air to air refueling terminology and the use of EMCON procedures.

Performance Standard. Satisfactory completion of procedures per the NFM and ATP-56B.

Prerequisite. FAM-1106, air to air refueling ground training will be completed prior to this flight.

External Syllabus Support. Fixed-wing or Tilt Rotor receiver aircraft and Special Use Airspace (SUAS).

AAR-1601	2.0	*	1 KC-130	A	D
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Goal. Introduce the student to the duties of an in-flight refueling observer during a day helicopter air to air refueling mission.

Requirement. The student will complete and file a DD Form 365-4, conduct an aircraft preflight, and perform refueling observer duties for a day helicopter air to air refueling mission. The student will keep separate records for comparison at the end of the flight. This flight should involve refueling multiple aircraft. The student should observe from both sides of the aircraft and respond to all ICS and radio transmissions during the entire evolution. The student will demonstrate a thorough understanding of all helicopter air to air refueling terminology and the use of EMCON procedures.

Performance Standard. Satisfactory completion of procedures per the NFM and ATP-56B.

Prerequisite. FAM-1106, air to air refueling ground training will be completed prior to this flight.

External Syllabus Support. Helicopter receiver aircraft and Special Use Airspace (SUAS).

7. Rapid Ground Refueling (RGR)

a. Purpose. Introduce student to RGR operations.

b. Crew Requirements. Shall be instructed by a Loadmaster Instructor.

c. Academic/Ground Training. Loadmasters should review the KC-130 ANTPP RGR chapter and the RGR class in the MAWTS-1 KC-130 Specific Academic Support Package.

RGR-1660	2.0	*	1 KC-130	A	D
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Goal. To introduce the student to basic RGR equipment, setup, and operations.

Requirement. Instructor shall demonstrate briefing requirements for RGR operations. Introduce personnel qualifications, duties, responsibilities and RGR crew coordination. Introduce RGR

equipment, site weapons and passenger considerations, site configurations and threat considerations. Introduce RGR fuel planning, site setup, operation, and breakdown procedures, and NVD considerations during RGR operations (optional).

Performance Standard. Demonstrate basic knowledge and operation of equipment. Demonstrate knowledge of basic 2 point RGR setup.

Prerequisite. FAM-1106.

External Syllabus Support. Crash/Fire/Rescue Support. Receiver aircraft or ground vehicle (as appropriate).

608. CORE SKILL PHASE (2000)

1. General. The focus of the Core Skill Phase is to train the Loadmaster in duties essential to wartime employment. This includes: Night Systems (NS), Long Range Navigation (LRN), Tactical Navigation (TN), Low Altitude Tactics (LAT), and IR Threat Reaction (TR). When the Loadmaster has attained NTPS-6118 and subsequent initial events have been successfully completed, then the Loadmaster is qualified in that event.

2. Night Systems (NS)

a. Purpose. To train the Loadmaster in NS and perform crew duties using NVDs during High Light Level (HLL) and Low Light Level (LLL) conditions.

b. General. The NSQ qualification syllabus consists of NS-1150, NS-1151, NS-2150 and requires 10 hours of total NVD time with at least 5 hours of Low Light Level (LLL) time. The initial 10 hours shall be flown in the aircraft. Loadmasters successfully completing these requirements shall be issued a Night Systems Qualified letter by the squadron commanding officer.

c. Crew Requirements. Loadmasters conducting initial and refresher Night Systems (NS) training shall be instructed by an NSI.

d. Academic/Ground Training. MAWTS-1 KC-130 NVD 1 and 2 Academic Support Package (ASP) courses and NITE lab.

NS-2150	2.0	365	R	1 KC-130	A	NS
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Goal. Qualify the Loadmaster in NS operations.

Requirement. The instructor will review aircraft preflight with NVD considerations taken into account. The student will preflight the aircraft and review exterior lighting demonstration with NVDs. The student will review aft lookout duties for NVD missions. Review aircraft lighting in normal, NVIS, and variations that occur with different terrain/water, cultural lighting and contrast under high light and low light conditions. The mission must be flown IAW the Aviation T&R Program manual light level standards.

Performance Standard. The Loadmaster shall demonstrate the ability to properly pre-flight and don NVDs, diagnose NVD emergencies and apply corrective action, understand capabilities and limitations of NVDs under HLL and LLL conditions.

Prerequisite. NS-1151 and 10 hours of NVD time (5 shall be in low-light conditions).

### 3. Long Range Navigation (LRN)

a. Purpose. Train the Loadmaster in requirements for OCONUS operations, review long-range, over water navigation procedures and introduce squadron SOPs concerning deployment operations.

b. General. This stage should have, at least, one mission that remains overnight outside the continental United States and requires clearing customs in a foreign country.

c. Academic/Ground Training. Student will receive instruction in the use of the Foreign Clearance Guide (FCG), Flight Information Handbook (FIH), and International Civil Aviation Organization (ICAO) procedures.

LRN-2160	6.0	365	R	1 KC-130	A	(N)
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Goal. Introduce, qualify, or maintain proficiency for long range navigation procedures.

Requirement. Perform all duties as a loadmaster for LRN operations. A thorough understanding of all publications and requirements associated with this mission will be demonstrated.

Performance Standard

Demonstrate a thorough understanding of the FCG, FIH, and ICAO procedures. Obtain and complete all paperwork related to arriving and departing from an OCONUS location.

Prerequisite. FAM-1106.

### 4. Tactical Navigation (TN)

a. Purpose. To attain and maintain the Tactical Navigation Core Skill. Upon completion of this stage, the Loadmaster will be capable of tactical ingress and egress to mission objective areas during day or night.

b. Crew Requirements. TN-2200 shall be instructed by a LMI. TN-2250 shall be instructed by an NSI.

c. Academic/Ground Training. Utilize academic courseware as outlined in the MAWTS-1 Course Catalog and review MAWTS-1 ASPs, NFM and KC-130 ANTTP.

TN-2200	2.0	365		1 KC-130	A	D
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Goal. Qualify or maintain proficiency in TN aft lookout duties.

Requirement. The crewmember will perform the duties of an aft lookout during a day TN mission. Emphasize cargo compartment preparation, crew briefing, lookout doctrine, scan for threats and terrain clearance, crew coordination and combat entry/exit checklists.

Performance Standard. Satisfactory completion of the procedures per the NFM and KC-130 ANTTP.

Prerequisite. TN-1200.

External Syllabus Support. Approved MTR or restricted area.

TN-2250	2.0	365	R	1 KC-130	A	NS
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Goal. Introduce, qualify or maintain proficiency in TN aft lookout doctrine utilizing NVDs.

Requirement. The Loadmaster will perform the duties of an aft lookout during a TN mission using NVDs. Emphasize cargo compartment preparation, crew briefing, lookout doctrine, scan for threat, crew coordination, and combat entry/exit checklists.

Performance Standard. Satisfactory completion of the procedures per the NFM and KC-130 ANTP.

Prerequisite. NS-2150 and TN-2200.

External Syllabus Support. Approved MTR or restricted area.

#### 5. Low Altitude Tactics (LAT)

a. Purpose. To attain and maintain the Low Altitude Tactics Core Skill. Upon completion of this stage, the Loadmaster will be capable of low altitude ingress and egress to mission objective areas during the day.

b. General. General LAT rules of conduct (ROC) are contained in NAVMC 3500.14 and KC-130 specific LAT guidance is contained in the KC-130 ANTP.

c. Crew Requirements. Shall be instructed by a LMI.

d. Academic/Ground Training. Review the low level navigation and LAT chapters of the KC-130 ANTP. Review MAWTS-1 KC-130 LAT Specific Academic Support Package.

LAT-2260	2.0	365	R	1 KC-130	A	D
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Goal. Introduce and qualify the Loadmaster, or maintain proficiency, in the duties as an aft lookout during a LAT mission.

Requirement. The Loadmaster will perform the duties of an aft lookout during a LAT mission. Emphasize cargo compartment preparation, crew briefing, lookout doctrine, scan for threats, crew coordination, and combat entry/exit checklists.

Performance Standard. Per the NFM and KC-130 ANTP.

Prerequisite. TN-2200.

External Syllabus Support. LAT approved MTR or restricted area.

#### 6. Threat Reaction (TR)

a. Purpose. To attain and maintain the Threat Reaction Core Skill in a low to medium threat environment. Introduce and maintain proficiency in the use of defensive maneuvering coordinated with Aircraft Survivability Equipment (ASE) suite against surface-to-air threat systems.

b. General

- (1) Aircraft must have fully operational ASE suite.
- (2) Appropriate decoy flares must be loaded prior to flight.
- (3) Threat emitters should be available.

c. Crew Requirements. Shall be instructed by a WTI.

d. Academic/Ground Training. Review the NFM, KC-130 ANTPP, Classified ANTPP, AFTTP 3-1 Threat Reference Guide. A WTI should administer the KC-130 ASE classes from the MAWTS-1 KC-130 Specific Academic Support Package.

TR-2400	2.0	365	R	1 KC-130	A/S	(N)
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Goal. Introduce the Loadmaster to lookout duties as they pertain to surface to air threats.

Requirement. Introduce the use of the ASE suite, in combination with tactical maneuvering, to defeat a ground-based threat. Demonstrate an understanding of ASE suite in all modes of operation.

Performance Standard. Satisfactory execution of procedures per the MAWTS-1 ASP, NFM, and KC-130 ANTPP.

Prerequisite. LAT-2260 and (NS-2150 if NS).

Ordinance. 120 flare expendables (required for initial event).

External Syllabus Support. Appropriate counter-measures range, a Smokey SAM crew with a minimum of 5 Smokey SAMs, MWS stimulator team if available.

609. MISSION SKILL PHASE (3000)

1. General. The focus of the Mission Skill Phase is to train the Loadmaster in the skills required to meet the Marine Corps Tasks (MCT). These missions include: Assault Landing Zone (ALZ) operations, Cargo and Passenger Loading (CPL), Air-to-Air Refueling (AAR), Rapid Ground Refueling (RGR), and Air Delivery (AD). When the Loadmaster has attained the NTPS-6118 and subsequent initial events have been successfully completed, the Loadmaster is qualified in that event.

2. Assault Landing Zone (ALZ)

a. Purpose. To attain and maintain the Mission Skill of operating from an ALZ. Upon completion of this stage, the Loadmaster will be capable of day or night ALZ operations, culminating in either an engine running on/offload (ERO), or combat offload, and to introduce the use of NVDs in the ALZ environment.

b. Crew Requirements. Shall be instructed by a LMI or a Loadmaster NSI if the training is conducted on NVDs.

c. Academic/Ground Training. Review the KC-130 ANTPP for ALZ operations and ERO procedures. Review the ALZ class in the MAWTS-1 KC-130 Specific Academic Support Package.

ALZ-3500      1.0      365                      R                      1 KC-130                      A      (N)

Goal.    Qualify or maintain proficiency in Combat Offload (COL).

Requirement.    Demonstrate procedures for preparation of the cargo compartment for ALZ operations and combat offload, as well as direct the pilot in reverse taxi procedures.

Performance Standard.    Satisfactory completion of the procedures per the NFM and KC-130 ANTP.

Prerequisite.    (NS-2150 if NS).

External Syllabus Support.    USMC MMT, MWSS EAF or USAF Combat Control Team with appropriate expeditionary airfield ALZ marking/lighting and ARFF support.

ALZ-3501      1.0      365                      R                      1 KC-130                      A      (N)

Goal.    Qualify or maintain proficiency in Engine Running Offload (ERO).

Requirement.    The Loadmaster will demonstrate the ability to prepare the cargo compartment for ALZ operations, conduct an ERO, and direct the pilot in reverse taxi procedures.

Performance Standard.    Satisfactory completion of the procedures per the NFM and KC-130 ANTP.

Prerequisite.    (NS-2150 if NS).

External Syllabus Support.    USMC MMT, MWSS EAF or USAF Combat Control Team with appropriate expeditionary airfield ALZ marking/lighting and ARFF support.

### 3. Cargo and Passenger Loading (CPL)

a. Purpose.    To attain and maintain the Mission Skill of Combat Assault Transport. Upon completion of this stage, the Loadmaster will be capable of day or night Cargo and Passenger Loading (CPL) operations.

#### b. General

(1) Preflight and configure an aircraft per mission requirements for flights involving passengers and/or cargo.

(2) Determine available seating and/or cargo space for load planning purposes.

(3) Use all loading aids conforming to the limitations, installations, and usage of each per NAVAIR 01-75GAA-9.

(4) Load and off-load cargo per NAVAIR 01-75GAA-9.

(5) Compute weight and balance for a flight transporting a passenger and/or cargo payload.

(6) Postflight aircraft and perform minor repairs as necessary to return cargo compartment to full operational readiness.

c. Crew Requirements. Shall be instructed by a LMI.

CPL-3510	3.0	365	R	1 KC-130	A/S	(N)
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Goal. Qualify or maintain proficiency in loading passengers with bags and rolling stock.

Requirement. The Loadmaster, under the direct supervision of a qualified instructor, will configure an aircraft for a flight transporting passengers and rolling stock. This may include installing centerline & sidewall seats. The Loadmaster will prepare a DD Form 365-4.

Performance Standard. The Loadmaster will plan, load and configure an aircraft for passengers and/or rolling stock per the NFM, Cargo Loading Manual, and OPNAVINST 3710.

Prerequisite. CPL-1503 and (NS-2150 if NS).

CPL-3511	3.0	365	R	1 KC-130	A/S	(N)
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Goal. Qualify or maintain proficiency in loading palletized cargo.

Requirement. The Loadmaster will configure and load an aircraft for a flight transporting palletized cargo. The Loadmaster will prepare a DD Form 365-4.

Performance Standard. Per the NFM, and Cargo Loading Manual and OPNAVINST 3710.

Prerequisite. CPL-1504 and (NS-2150 if NS).

CPL-3512	3.0	365	R	1 KC-130	A/S	(N)
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Goal. Qualify or maintain proficiency in loading hazardous cargo.

Requirement. The Loadmaster will configure an aircraft for a flight transporting hazardous cargo IAW MCO P4030.19\_. The Loadmaster will prepare a DD Form 365-4.

Performance Standard. Per the NFM, Cargo Loading Manual, and OPNAVINST 3710.

Prerequisite. CPL-1505 and (NS-2150 if NS).

#### 4. Air-to-Air Refueling (AAR)

a. Purpose. To attain and maintain the Air-to-Air Refueling (AAR) Mission Skill. Upon completion of this stage, the Loadmaster will be capable of fixed wing, tilt rotor, and helicopter AAR operations in the day or night environment.

b. General. Emission control procedures may be used for any of the events in this stage.

c. Crew Requirements. Shall be instructed by a LMI. Loadmasters conducting initial and refresher Night Systems (NS) training shall be instructed by an NSI.

d. Academic/Ground Training. Review NFM, ATP-56(B), KC-130 ANTTP, and MAWTS-1 AAR ASP.

AAR-3600	2.0	365		1 KC-130	A	D
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Goal. Qualify or maintain proficiency in AAR observer duties for Fixed Wing (FW) or Tilt Rotor (TR) AAR procedures.

Requirement. The Loadmaster will complete and file a DD Form 365-4, conduct a cargo compartment preflight for the AAR mission, and perform AAR observer during FWAAR or TRAAR refueling mission. The Loadmaster will keep all records for the flight and monitor the ICS and all radio transmissions during the mission.

Performance Standard. Satisfactory completion of the procedures per the NFM, ATP-56(B), and KC-130 ANTTP.

Prerequisite. AAR-1600.

External Syllabus Support. Fixed Wing or Tilt Rotor receiver aircraft and special use airspace.

AAR-3601	2.0	365		1 KC-130	A	D
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Goal. Qualify or maintain proficiency in AAR observer duties for Helicopter AAR (HAAR) procedures.

Requirement. The Loadmaster will complete and file a DD Form 365-4, conduct a cargo compartment preflight for an AAR mission, and perform the duties of an in-flight refueling observer during HAAR. The Loadmaster will keep all records for the flight. The Loadmaster will monitor the ICS and all radio transmissions during the mission.

Performance Standard. Satisfactory completion of the procedures per the NFM, ATP-56(B), and KC-130 ANTTP.

Prerequisite. AAR-1601.

External Syllabus Support. Helicopter receiver aircraft and special use airspace.

AAR-3650	2.0	365	R	1 KC-130	A	NS
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Goal. Qualify or maintain proficiency in AAR observer duties using NVDs in AAR.

Requirement. The Loadmaster will complete and file a DD Form 365-4, conduct a cargo compartment preflight for an AAR mission, and perform AAR observer duties. The Loadmaster will keep all records for the flight and monitor the ICS and all radio transmissions during the mission.



Performance Standard. Satisfactory completion of the procedures per the NFM, ATP-56(B), and KC-130 ANTTP.

Prerequisite. NS-2150, AAR-3600, AAR-3601.

External Syllabus Support. Receiver aircraft and special use airspace.

5. Rapid Ground Refueling (RGR)

a. Purpose. To attain and maintain the Rapid Ground Refueling Mission Skill. Upon completion of this stage, the Loadmaster will be capable of conducting Rapid Ground Refueling of aircraft and ground vehicles in any environment, day or night.

b. Crew Requirements. This stage of training shall be instructed by a Day Refueling Supervisor (RS) for all day events and a NS Refueling Supervisor (RS) for all night events.

c. Academic/Ground Training. Review KC-130 ANTTP RGR procedures and MAWTS-1 RGR ASP.

RGR-3660	2.0	365		1 KC-130	A	D
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Goal. Qualify or maintain proficiency as a RGR point man during day RGR operations.

Requirement. The Loadmaster will assist the Refueling Supervisor (RS) in the conduct of a day RGR, minimum 2-point setup, including the actual transfer of fuel to an aircraft, or tactical ground vehicles (TGV). The Loadmaster will man and perform all duties associated with a refueling point during a RGR mission.

Prerequisite. RGR-1660.

Performance Standard. Satisfactorily complete the procedures per NFM and KC-130 ANTTP.

External Syllabus Support. ARFF; aircraft or TGV.

RGR-3651	2.0	365	R	1 KC-130	A	NS
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Goal. Qualify or maintain proficiency as a RGR point man during NS RGR operations.

Requirement. The Loadmaster will assist the Refueling Supervisor (RS) in the conduct of a NS RGR, minimum 2-point setup, including the actual transfer of fuel to an aircraft, or tactical ground vehicles (TGV). The Loadmaster will man and perform all duties associated with a refueling point during a RGR mission.

Performance Standard. Satisfactorily complete the procedures per NFM and KC-130 ANTTP.

Prerequisite. NS-2150 and RGR-3660.

External Syllabus Support. ARFF; aircraft or TGV.

6. Air Delivery (AD)

a. Purpose. To attain and maintain the Air Delivery Mission Skill. Upon completion of this stage, the Loadmaster will be capable of planning and executing an AD of Container Delivery System (CDS), Heavy Equipment (HE), and Personnel (PERS), day or night.

b. General. For initial codes the LMUI will act as the primary LM.

c. Crew Requirements. Shall be instructed by a LMI. Loadmasters conducting initial and refresher Night Systems (NS) training shall be instructed by an NSI.

d. Academic/Ground Training. Review KC-130 ANTPP Air Delivery chapter, KC-130 Tactical Pocket Guide, and MAWTS-1 KC-130 Specific Academic Support Package.

AD-3700	2.0	180	SC,R	1 KC-130	A	(N)
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Goal. Qualify or maintain proficiency in CDS AD.

Requirement. The Loadmaster will conduct a CDS AD. The Loadmaster will perform preflight, rigging, briefing, loading, execution, and emergency procedures.

Performance Standard. Satisfactory completion of the procedures per the NFM, Cargo Loading Manual, and KC-130 ANTPP.

Prerequisite. CPL-3511, (NS-2150 if NS).

External syllabus. AD unit of any service for cargo rigging and DZ control.

AD-3701	2.0	180	R	1 KC-130	A	(N)
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Goal. Qualify or maintain proficiency in HE AD.

Requirement. The Loadmaster will conduct a HE AD. The Loadmaster will perform preflight, rigging, briefing, loading, execution, and emergency procedures.

Performance Standard. Satisfactory completion of the procedures per the NFM, Cargo Loading Manual, and KC-130 ANTPP.

Prerequisite. CPL-3511, (NS-2150 if NS).

External Syllabus Support. AD unit of any service for cargo rigging and DZ control.

AD-3702	2.0	180	R	1 KC-130	A	(N)
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Goal. Qualify or maintain proficiency in static line PERS AD.

Requirement. The Loadmaster will perform a static PERS AD. The Loadmaster will perform preflight, rigging, briefing, loading, execution, and emergency procedures.

Performance Standard. Satisfactory completion of the procedures per the NFM, Cargo Loading Manual, and KC-130 ANTPP.

Prerequisite. CPL-3510, (NS-2150 if NS).

External Syllabus Support. Parachutists and DZ control.

610. CORE PLUS SKILL PHASE (4000)

1. General. Upon completion of this phase of training, the Loadmaster will be qualified in Air-to-Air Defensive Tactics (DT), advanced Air Delivery (AD) and Battlefield Illumination (BI). When the Loadmaster has attained NTPS-6118 and subsequent initial events have been successfully completed, then the Loadmaster is qualified in that event.

2. Defensive Tactics (DT)

a. Purpose. To attain and maintain the Core Plus Skill of employing Defensive Tactics against an air threat by combining maneuver and use of the ASE suite. Upon completion of this stage, the Loadmaster will be capable of flying against 1 or 2 adversaries.

b. General. The DT qualification requirements consist of DT-4410. The following is recommended but not required:

(1) Use of the Rear Vision Device (RVD) and ASE suite.

(2) Appropriate chaff and decoy flares loaded prior to flight if available.

c. Crew Requirements. DT shall be instructed by any WTI.

d. Academic/Ground Training. Review the KC-130 ANTPP, Classified ANTPP, and AFTTP 3-1 Threat Reference Guide concerning air-to-air threats. Review the KC-130 ASE, DT, Stress & Performance Limitations and Threat Counter-tactics classes from the MAWTS-1 KC-130 Specific Academic Support Package.

DT-4410	2.0	365	R	1 KC-130	A	D
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Goal. Introduce and qualify the Loadmaster, or to maintain proficiency for the DT qualified Loadmaster, in the duties of an aft lookout or RVD lookout, and aircrew coordination procedures during a defensive tactics mission maneuvering relative to single or multiple airborne threats.

Requirement. The Loadmaster will perform the duties of an aft lookout or RVD lookout during a flight involving the use of defensive tactics. Emphasize cargo compartment preparation, crew briefing, lookout doctrine, scan for airborne threats, threat maneuvering calls and terrain clearance, crew coordination and combat entry/exit checklists.

Performance Standard. Per the NFM and KC-130 ANTPP.

Prerequisite. LAT-2260.

Ordinance. 140 flares, 160 chaff.

External syllabus. Appropriate aggressor aircraft and approved airspace. SUAS authorized for expendables.

3. Air Delivery (AD)

a. Purpose. To attain and maintain the Core Plus Skill of Air Delivery (AD). Upon completion of this phase, the Loadmaster will be capable of executing combination and High Altitude Low Opening (HALO) / High Altitude High Opening (HAHO) Military Free Fall (MFF) AD.

b. Crew Requirements. Shall be instructed by a LMI. Loadmasters conducting initial and refresher Night Systems (NS) training shall be instructed by an NSI.

c. Academic/Ground Training. Review KC-130 ANTPP Air Delivery chapter and KC-130 Tactical Pocket Guide. Review MAWTS-1 AD courseware, MAWTS-1 ASP for General A/C Prep, and OPNAV 3710.7\_ altitude requirements.

AD-4700	2.0	365	R	1 KC-130	A	(N)
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Goal. Introduce and qualify the Loadmaster, or to maintain proficiency in HALO/HAHO Military Free Fall (MFF) personnel air delivery.

Requirement. The Loadmaster under training will demonstrate mastery of all aspects of a military free fall airdrop. The Loadmaster will preflight, rig, brief, load, and execute a free fall airdrop. The Loadmaster will comply with oxygen requirements for MFF when conducted from an altitude greater than 10,000 feet for both crew and parachutists. Initial events shall include the use of oxygen and discussion of Physiological requirements.

Performance Standard. Satisfactory completion of the procedures per the NFM and KC-130 ANTPP.

Prerequisite. (NS-2150 if NS).

External Syllabus Support. Military free fall unit, JAI, DZ control and flight surgeon/physiologist if applicable.

AD-4701	2.0	180	R	1 KC-130	A	(N)
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Goal. Introduce and qualify the Loadmaster, or to maintain proficiency in combination air delivery.

Requirement. The Loadmaster will perform the duties as Primary Loadmaster during a combination airdrop. The Loadmaster will perform preflight, rigging, briefing, loading, and execution and emergency procedures. Emphasize execution checklists, rigging, CDS emergency procedures and towed parachutist procedures. Use of the BSA and CVR for CDS Combo is encouraged when available.

Performance Standard. Satisfactory completion of the procedures per the NFM, Cargo Loading Manual, and KC-130 ANTPP.

Prerequisite. AD-3700, AD-3701, AD-3702, (NS-2150 if NS).

External syllabus. Parachutists, AD Platoon, and DZ control.

4. Battlefield Illumination (BI)

a. Purpose. To attain and maintain the Mission Plus Skill of Battlefield Illumination (BI). Upon completion of this phase, the Loadmaster will be capable of planning and executing BI.

b. Crew Requirements. Shall be instructed by a WTI.

c. Academic/Ground Training. Utilize academic courseware as outlined in the MAWTS-1 course catalog and review MAWTS-1 ASPs, NFM, and KC-130 ANTP.

BI-4710	3.0	365	R	1 KC-130	A	N
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Goal. Introduce and qualify the Loadmaster, or to maintain proficiency in aircraft preflight, configuration, rigging, loading and mission execution procedures for the Battlefield Illumination mission as a Team Member/Team Leader.

Requirement. The Loadmaster will load, secure and rig for emergency jettison the flare delivery system per the KC-130 ANTP and Cargo Loading Manual. The Loadmaster will demonstrate the loading and operation of the flare dispenser. The Loadmaster will adhere to crew coordination, safety precautions and emergency procedures.

Performance Standard. Per the NFM, Cargo Loading Manual, and KC-130 ANTP.

Prerequisite. (NS-2150 if NS).

Ordinance. 15 LUU-2A/B, B/B or LUU-19 flares as required.

External syllabus Support. Ordnance Qualified Personnel and SUAS authorized for aircraft parachute flares and illumination.

611. INSTRUCTOR TRAINING PHASE (5000)

1. General. The purpose of this phase of training is to train qualified Loadmasters to instruct various levels of instruction.

a. Loadmasters shall be recommended for instructor training via Aircrew Performance Review Board (APRB). Upon recommendation, the Loadmaster shall complete appropriate syllabus requirements. Upon completion of syllabus requirements, the commanding officer shall designate the Loadmaster as an instructor.

b. Standardization will be emphasized throughout instructor training.

c. Due to the lack of a FRS for the KC-130T community, Core Skill Introduction Instruction may occur at the fleet squadrons in accordance with NAVMC 3500.14.

2. Loadmaster Instructor (LMI)

a. Purpose. To develop qualified Loadmaster Instructors (LMIs) using a standardized instructor training program. This syllabus is designed to prepare Loadmasters to instruct specific events. This portion of the syllabus shall be used by VMGR squadrons to assist in instructor standardization.

b. General

(1) A prospective LMI shall be a Loadmaster that the APRB and commanding officer determine has the requisite airmanship and maturity to begin Loadmaster instruction.

(2) The Loadmaster shall be Core Skill (2000) and Mission Skill (3000) phase complete and have a minimum of 750 hours as a qualified Loadmaster prior to being recommended by the APRB.

(3) The LMI shall be designated in writing by the squadron commanding officer.

c. Crew Requirements. Shall be instructed by an ANI.

d. Academic/Ground Training. The IUT shall review all directives pertinent to the safe conduct of flight to include the OPNAV 3710.7, NFM, all tactics publications and local SOPs. The IUT shall be familiar with the T&R Program Manual and this NAVMC.

LMI-5100	3.0	*	E	1	KC-130	A	(N)
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Goal. Begin training Loadmaster Instructor.

Requirement. The LM IUT will demonstrate the ability to instruct a Loadmaster in a Core Skill T&R event. The IUT will demonstrate the ability to correct common student errors as simulated by a Loadmaster ANI. The IUT will apply standardized instructional techniques.

Performance Standard. The IUT shall be evaluated on the ability to correct common student errors as simulated by a Loadmaster ANI and apply standardized instructional techniques.

Prerequisite. RQD-6118, 750 hours as a qualified Loadmaster, APRB recommendation.

External Syllabus Support. See appropriate Core Skill stage description.

LMI-5101	3.0	*	E	1	KC-130	A	(N)
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Goal. Continue training Loadmaster Instructor.

Requirement. The LM IUT will demonstrate the ability to instruct a Loadmaster in a Mission Skill T&R event. The IUT will demonstrate the ability to correct common student errors. The LM IUT will apply standardized instructional techniques.

Performance Standard. The IUT shall be evaluated on the ability to correct common student errors as simulated by a Loadmaster ANI and apply standardized instructional techniques.

Prerequisite. LMI-5100.

External Syllabus Support. See appropriate Mission Skill stage description.

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LMI-5102	2.0	*	SC,R	E	1	KC-130	A	(N)
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Goal. Loadmaster Instructor (LMI) evaluation.

Requirement. The LM IUT will demonstrate the ability to instruct a Loadmaster in a Core Skill or Mission Skill T&R event. The IUT will demonstrate the ability to correct common student errors. The IUT will apply standardized instructional techniques. At the completion of this sortie, the Loadmaster may be designated by the commanding officer as a Loadmaster Instructor (LMI).

Performance Standard. The IUT shall be evaluated on the ability to correct common student errors as simulated by a Loadmaster ANI and apply standardized instructional techniques.

Prerequisite. LMI-5101.

External Syllabus Support. See appropriate Core Skill or Mission Skill stage description.

### 3. NATOPS Instructor/Assistant NATOPS Instructor (NI/ANI)

a. Purpose. Qualify IUT as a NATOPS Instructor/Assistant NATOPS Instructor (NI/ANI).

b. General. The purpose of this stage is to qualify the IUT as a NATOPS Instructor. The NI/ANI primarily conducts annual NATOPS evaluations. The Loadmaster shall have a minimum of 1500 hours as a qualified Loadmaster prior to being recommended by the APRB. The IUT shall be instructed on proper check-ride preparation, in-flight supervision of the aircraft and post-flight administrative requirements. Upon completion of the NI/ANI syllabus, the Loadmaster shall be designated an ANI or NI by the squadron commanding officer or designated the Group NATOPS Evaluator (GNE) by the group commanding officer.

c. Crew Requirements. NI-5140 shall be instructed by an ANI, NI, GNE, or Model Manager. NI-5141 shall be instructed by the NI, GNE, or Model Manager.

d. Academic/Ground Training. The IUT shall be familiar with all applicable OPNAV and NATOPS directives, with an emphasis on NATOPS normal and emergency procedures.

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NI-5140	2.0	*		E	1	KC-130	A	(N)
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Goal. NI/ANI training.

Requirement. The ANI/NI IUT will demonstrate the ability to evaluate a Loadmaster in NATOPS procedures. Introduce the IUT to

the skills required to correct common student errors. Emphasize instructional techniques, check-ride preparation, aircraft monitoring and post-check administrative duties.

Performance Standards

- 1) Demonstrate familiarity with common Loadmaster errors and instructional techniques.
- 2) Maintain proper supervision to maintain safe flight.
- 3) Develop a script for a NATOPS/Instrument checkride sortie.

Prerequisite. LMI-5102, 1500 hours as a qualified Loadmaster, and APRB recommended.

NI-5141	2.0	*	SC,R	E	1	KC-130	A	(N)
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Goal. ANI/NI evaluation.

Requirement. The ANI/NI IUT will evaluate a Loadmaster in NATOPS procedures under the supervision of an NI/GNE/Model Manager. The IUT shall be evaluated on instructional technique, check-ride preparation, aircraft monitoring and post-check administrative duties. At the completion of this sortie, the Loadmaster may be designated an ANI or NI by the commanding officer.

Performance Standards

- 1) Demonstrate familiarity with common Loadmaster errors and instructional techniques.
- 2) Maintain proper supervision to maintain safe flight.
- 3) Develop a script for a NATOPS/Instrument checkride sortie.
- 4) Evaluated on instructional technique, check-ride preparation, aircraft monitoring and post-check administrative duties.

Prerequisite. NI-5140.

4. Night Systems Instructor (NSI)

a. Purpose. To certify a Loadmaster as an instructor capable of safely conducting ground and airborne instruction of the KC-130 Night Systems syllabus.

b. General. Refer to NAVMC 3500.14, MCO 3500.109 and the MAWTS-1 course catalog. The build-up phase may be developed and supervised by the Squadron NSI. Upon certification by MAWTS-1, the NSI may be designated by the squadron commanding officer.

c. Crew requirements. NSI-5150 and NSI-5151 shall be instructed by a squadron NSI or a MAWTS-1 Instructor. NSI-5152 shall be instructed by the a MAWTS-1 Instructor.

d. Academic/Ground Training. Refer to the MAWTS-1 KC-130 Course Catalog.

NSI-5150	3.0	*	E	1	KC-130	A	NS
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Goal. Begin NSI IUT.

Requirement. The IUT will demonstrate the ability to instruct a crewmember in a NS Core Skill T&R event. The IUT will demonstrate



the ability to correct common student errors as simulated by a crewmember NSI. The IUT will apply standardized instructional techniques.

Performance Standard. IAW MAWTS-1 Course Catalog.

Prerequisite. NS-2150 and LMI-5102.

NSI-5151	3.0	*		E	1	KC-130	A	NS
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Goal. Continue NSI IUT.

Requirement. The IUT will demonstrate the ability to instruct a crewmember in a NS Mission Skill T&R event. The IUT will demonstrate the ability to correct common student errors as simulated by a crewmember NSI. The IUT will apply standardized instructional techniques.

Performance Standard. IAW MAWTS-1 Course Catalog.

Prerequisite. NSI-5150 and IAW MAWTS-1 Course Catalog.

NSI-5152	2.0	*		R	E	1	KC-130	A	NS
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Goal. NSI Certification.

Requirement. Per MAWTS-1 Catalog. Upon certification by MAWTS-1, the NSI designation may be assigned by the squadron commanding officer.

Performance Standard. Satisfactorily execute the procedures per NFM, KC-130 ANTP, and MAWTS-1 Course Catalog.

Prerequisite. NSI-5150 and NSI-5151.

External Syllabus Support. MAWTS-1 Instructor.

#### 5. Weapons and Tactics Instructor (WTI)

a. Purpose. Develop highly qualified Loadmasters into effective unit tactics instructors and expose them to current Marine Corps tactical doctrine. Additionally, this stage is designed to increase knowledge and experience of the capabilities and associated tasks of the KC-130.

b. General. Tactics and techniques will be taught per the KC-130 ANTP and the MAWTS-1 supplements. Only MAWTS-1 instructors shall instruct/qualify flights in this stage. Qualification shall only be achieved as shown in the WTI Course Catalog. Upon certification by MAWTS-1, the WTI shall be designated by the squadron commanding officer.

c. Crew requirements. Refer to the MAWTS-1 WTI Course Catalog.

d. Academic/Ground Training. Refer to the MAWTS-1 WTI Course Catalog.

WTI-5999	*	*	E				KC-130	A	
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Requirement. Reference the MAWTS-1 KC-130 Course Catalog.

612. REQUIREMENTS, QUALIFICATIONS, DESIGNATIONS (RQD) PHASE (6000)

1. General. To provide a vehicle for tracking codes associated with certifications, qualifications and designations. E-coded sorties are evaluation sorties. Once the flight to attain the qualification/designation is complete, a letter from the squadron commanding officer awarding the qualification/designation shall be placed in the NATOPS jacket before that qualification/designation can be utilized.

2. KC-130T NATOPS Evaluation POI

a. Purpose. To evaluate the Loadmaster's knowledge of aircraft systems, performance limitations, emergency procedures, and flight and ground operations.

b. General

(1) NATOPS Instructors shall conduct the NATOPS evaluation in accordance with OPNAVINST 3710.7 series and other applicable directives, instructions, and orders.

(2) The NATOPS Instructor shall utilize the NATOPS Model Manager generated NATOPS Aviation Training Form (ATF) and the evaluation metrics required for the accomplishment and performance of the standardized criterion to determine whether the Loadmaster completed the sortie. Prior to the oral examination, the NATOPS Instructor shall review the NATOPS monthly emergency procedures examinations for the previous twelve (12) months and previous NATOPS evaluations. At the discretion of the squadron commanding officer, a letter designating the Loadmaster as NATOPS qualified shall be placed in the NATOPS jacket.

(3) NATOPS Evaluatees shall complete and have a graded open book, closed book, and oral examination prior to the commencement of the actual NATOPS evaluation event.

NTPS-6010    3.0    365            SC,R    E    Open Book NATOPS Examination

Goal. The open book examination shall consist of, but not be limited to the question bank. The purpose of the open book examination is to evaluate the Loadmaster's knowledge of the appropriate publications and the aircraft.

Performance Standard. Achieve a minimum score of 3.5 on the open book examination.

NTPS-6011    1.0    365            SC,R    E    Closed Book NATOPS Examination

Goal. The purpose of the closed book examination is to evaluate the Loadmaster's knowledge of the concerning normal/emergency procedures and aircraft limitations.

Performance Standard. Achieve a minimum score of 3.3 on the closed book examination.

NTPS-6012    3.0    365                    SC,R    E    Open Book NATOPS Examination

Goal. The oral examination shall consist of, but not be limited to the question bank. The instructor may draw upon their experience to propose questions of a direct and positive manner and in no way be opinionated to evaluate the Loadmaster's knowledge of the concerning normal/emergency procedures, aircraft limitations, and performance.

Performance Standard. Achieve a minimum grade of qualified on the oral examination.

NTPS-6118    3.0    365                    SC,R    E    1 KC-130    A    (N)

Goal. NATOPS evaluation.

Requirement. A NATOPS Instructor/Assistant NATOPS Instructor will evaluate the Loadmaster per NATOPS and the KC-130 ANTPP procedures.

Performance Standard. Per the NATOPS and KC-130 ANTPP.

Prerequisites. NTPS-6010, NTPS-6011, NTPS-6012, and Core Skill Introduction (1000) phase complete.

### 3. Refueling Supervisor (RS)

a. Purpose. To evaluate the Loadmaster's knowledge of Rapid Ground Refueling and become qualified as a RGR Refueling Supervisor (RS). Upon completion of this stage, the Loadmaster shall be designated a Refueling Supervisor (RS) by the squadron commanding officer.

b. Crew Requirements. This stage of training shall be instructed by a Day Refueling Supervisor (RS) for all day events and a NS Refueling Supervisor (RS) for all night events.

c. Academic/Ground Training. Review KC-130 ANTPP RGR procedures and MAWTS-1 RGR ASP.

RS-6660       2.0    180                    R                    1 KC-130                    A    D

Goal. Qualify or maintain proficiency as a day RGR Refueling Supervisor (RS).

Requirement. The Loadmaster will plan, brief, and execute a daytime RGR, minimum 2 point setup, including an actual transfer of fuel to an aircraft or TGV.

Performance Standard. Satisfactorily complete the procedures per NFM and KC-130 ANTPP.

Prerequisites. RGR-3660 and RGR-3651.

External Syllabus Support. ARFF; aircraft or TGV.

RS-6650      2.0    180                      R                      1 KC-130                      A    NS

Goal. Qualify or maintain proficiency as a NS RGR Refueling Supervisor (RS).

Requirement. The Loadmaster will plan, brief, and execute a NS RGR, minimum 2 point setup, including an actual transfer of fuel to an aircraft or TGV.

Performance Standard. Satisfactorily complete the procedures per NFM and KC-130 ANTTP.

Prerequisite. RS-6660.

External Syllabus Support. ARFF; aircraft or TGV.

4. Quality Assurance Safety Officer (QASO)

a. Purpose. To evaluate the Loadmaster's knowledge of Battlefield Illumination (BI) and become qualified as a Quality Assurance Safety Officer (QASO). Upon completion of this stage, the Loadmaster shall be designated a Quality Assurance Safety Officer (QASO) by the squadron commanding officer.

b. Crew Requirements. Shall be instructed by a WTI.

c. Academic/Ground Training. Utilize academic courseware as outlined in the MAWTS-1 course catalog and review MAWTS-1 ASPs, NFM, and KC-130 ANTTP.

QASO-6710      3.0    180                      R                      1 KC-130                      A    N

Goal. Introduce and qualify the Loadmaster, or to maintain proficiency in aircraft preflight, configuration, rigging, loading and mission execution procedures for the Battlefield Illumination mission as a Quality Assurance Safety Officer (QASO).

Requirement. The Loadmaster will supervise Team Member/Team Leader who load, secure and rig for emergency jettison the flare delivery system per the KC-130 ANTTP and Cargo Loading Manual. The Loadmaster will supervise the loading and operation of the flare dispenser. The Loadmaster will adhere to crew coordination, safety precautions and emergency procedures while performing duties of a QASO as defined in the KC-130 ANTTP.

Performance Standard. Per the NFM, Cargo Loading Manual, and KC-130 ANTTP.

Prerequisites. BI-4710 and (NS-2150 if NS).

Ordnance. 15 LUU-2A/B, B/B or LUU-19 flares as required.

External syllabus Support. Ordnance Qualified Personnel and SUAS authorized for aircraft parachute flares and illumination.

613. T&R SYLLABUS MATRIX

KC-130T LOADMASTER														
1000 CORE SKILL INTRODUCTION PHASE														
STAGE	TRNG CODE	EVENT DESC	FLIGHT HOURS	SIMULATOR HOURS	REFLY INTERVAL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVALUATION	OPTIONS	CHAINING	EVENT CONVERSION
FAMILIARIZATION (FAM)														
FAM	1100	SQDN, A/C & EP GROUND FAM	4.0		*	A	1	D		R,SC				115
FAM	1101	PRE/POST FLIGHT & EP GROUND FAM	4.0		*	A	1	D	1100	R,SC				116
FAM	1102	HF RADIO & EP GROUND FAM	4.0		*	A	1	D	1101	R,SC				150
FAM	1103	HF RADIO & EP GROUND FAM 2	4.0		*	A	1	D	1102	R,SC				151
FAM	1104	NATOPS, SOP, & EP FAM FLIGHT 1	4.0		*	A	1	D	1103	R,SC				115
FAM	1105	NATOPS, SOP, & EP FAM FLIGHT 2	4.0		*	A	1	D	1104	R,SC				116
FAM	1106	HF RADIO, SOP & AC LIM FLIGHT	4.0		*	A	1	D	1105	R,SC				151
			28.0											
NIGHT SYSTEMS (NS)														
NS	1150	NS HLL FAM	2.0		*	A	1	NS	1101					204
NS	1151	NS LLL FAM	3.0		*	A	1	NS	1150					204
			5.0											
TACTICAL NAVIGATION (TN)														
TN	1200	TN INTRO	2.0		*	A	1	D	1101					
			2.0											
CARGO AND PASSENGER LOADING (CPL)														
CPL	1500	PAX/BAGS & ROLLING STOCK		4.0	*	S/A		D	1101					100
CPL	1501	PALLETIZED CARGO		4.0	*	S/A		D	1101					101
CPL	1502	HAZARDOUS CARGO		4.0	*	S/A		D	1101					102
CPL	1503	PAX/BAGS & ROLLING STOCK	3.0		*	A	1	D	1500					100
CPL	1504	PALLETIZED CARGO	3.0		*	A	1	D	1501					101
CPL	1505	HAZARDOUS CARGO	3.0		*	A	1	D	1502					102
			9.0	12.0										
AIR-TO-AIR REFUELING (AAR)														
AAR	1600	FWAAR/TRAAR	2.0		*	A	1	D	1106					110
AAR	1601	HAAR	2.0		*	A	1	D	1106					111
			4.0											
RAPID GROUND REFUELING (RGR)														
RGR	1660	RGR INTRO	2.0		*	A	1	D	1106					
			2.0	0.0										
			50.0	12.0										

KC-130T LOADMASTER													
2000 CORE SKILL PHASE													
STAGE	TRNG CODE	EVENT DESCR	FLIGHT HOURS	SIMULATOR HOURS	REFLY INTERVAL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVALUATION	OPTIONS	EVENT CONVERSION
NIGHT SYSTEMS (NS)													
NS	2150	NS QUAL	2.0		365	A	1	NS	1151	R			204
			2.0	0.0									
LONG RANGE NAVIGATION (LRN)													
LRN	2160	LRN	6.0		365	A	1	(N)	1106	R			250
			6.0	0.0									
TACTICAL NAVIGATION (TN)													
TN	2200	DAY TN	2.0		365	A	1	D	1200				220
TN	2250	NS TN	2.0		365	A	1	NS	2150,2200	R			223
			4.0	0.0									
LOW ALTITUDE TACTICS (LAT)													
LAT	2260	DAY LAT	2.0		365	A	1	D	2200	R			322
			2.0	0.0									
THREAT REACTION (TR)													
TR	2400	GRND THREAT/ASE	2.0		365	A/S	1	(N)	2260, (2150 IF NS)	R			261
			2.0	0.0									
			16.0	0.0									

KC-130T LOADMASTER														
3000 MISSION SKILL PHASE														
STAGE	TRNG CODE	EVENT DESC	FLIGHT HOURS	SIMULATOR HOURS	REFLY INTERVAL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVALUATION	OPTIONS	CHAINING	EVENT CONVERSION
ASSUALT LANDING ZONE (ALZ)														
ALZ	3500	COMBAT OFFLOAD	1.0		365	A	1	(N)	(2150 IF NS)	R			(2150 IF NS)	370
ALZ	3501	ENG RUN OFFLOAD	1.0		365	A	1	(N)	(2150 IF NS)	R			(2150 IF NS)	271
			2.0											
CARGO AND PASSENGER LOADING (CPL)														
CPL	3510	PAX / ROLLING	3.0		365	A/S	1	(N)	1503,(2150 IF NS)	R			(2150 IF NS)	215
CPL	3511	PALLET	3.0		365	A/S	1	(N)	1504,(2150 IF NS)	R			(2150 IF NS)	216
CPL	3512	HAZMAT	3.0		365	A/S	1	(N)	1505,(2150 IF NS)	R			(2150 IF NS)	217
			9.0											
AIR-TO-AIR REFUELING (AAR)														
AAR	3600	FWAAR/TRAAR	2.0		365	A	1	D	1600					210
AAR	3601	HAAR	2.0		365	A	1	D	1601					211
AAR	3650	NS AAR	2.0		365	A	1	NS	2150,3600,3601	R			2150,3600,3601	213
			6.0											
RAPID GROUND REFUELING (RGR)														
RGR	3660	DAY POINT MAN	2.0		365	A	1	D	1660					273
RGR	3651	NS POINT MAN	2.0		365	A	1	NS	2150,3660	R			2150,3660	274
			4.0											
AIR DELIVERY (AD)														
AD	3700	CDS	2.0		180	A	1	(N)	3511,(2150 IF NS)	SC,R			(2150 IF NS)	340
AD	3701	HE	2.0		180	A	1	(N)	3511,(2150 IF NS)	R			(2150 IF NS)	441
AD	3702	PERS STATIC	2.0		180	A	1	(N)	3510,(2150 IF NS)	R			(2150 IF NS)	241
			6.0											
			27.0											

KC-130T LOADMASTER													
4000 CORE PLUS SKILLS PHASE													
STAGE	TENG CODE	EVENT DESC	FLIGHT HOURS	SIMULATOR HOURS	REFLY INTERVAL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVALUATION	OPTIONS	CHAINING
EVENT CONVERSION													
DEFENSIVE TACTICS (DT)													
DT	4410	DT ASE/RVD	2.0		365	A	1	D	2260	R			2200,2260
			2.0										462
AIR DELIVERY (AD)													
AD	4700	HALO/HAHO	2.0		365	A	1	(N)	(2150 IF NS)	R			(2150 IF NS)
AD	4701	COMBO	2.0		180	A	1	(N)	3700,3701,3702, (2150 IF NS)	R			3700 IF CDS, 3701 IF HE, 3702 IF PERS, (2150 IF NS)
			4.0										442
BATTLEFIELD ILLUMINATION (BI)													
BI	4710	TM/TL	3.0		365	A	1	N	(2150 IF NS)	R			(2150 IF NS)
			3.0										444
			9.0										



KC-130T LOADMASTER														
5000 INSTRUCTOR TRAINING PHASE														
STAGE	TRNG CODE	EVENT DESC	FLIGHT HOURS	SIMULATOR HOURS	REFLY INTERVAL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVALUATION	OPTIONS	CHAINING	EVENT CONVERSION
LOADMASTER INSTRUCTOR (LMI)														
LMI	5100	IUT I	3.0		*	A	1	(N)	6118, 750 hours LM, APRB recommended		E			501
LMI	5101	IUT II	3.0		*	A	1	(N)	5100		E			502
LMI	5102	LMI EVAL	2.0		*	A	1	(N)	5101	SC,R	E			605
			8.0											
NATOPS INSTRUCTOR (ANI/NI)														
NI	5140	ANI/NI IUT	2.0		*	A	1	(N)	5102, 1500 hours LM, APRB recommended		E			606
NI	5141	ANI/NI EVAL	2.0		*	A	1	(N)	5140	SC,R	E			606
			4.0											
NIGHT SYSTEMS INSTRUCTOR (NSI)														
NSI	5150	NSI IUT I	3.0		*	A	1	NS	2150,5102		E			607
NSI	5151	NSI IUT II	3.0		*	A	1	NS	5150		E			607
NSI	5152	NSI CERT	2.0		*	A	1	NS	5150,5151	R	E			607
			8.0											
WEAPONS TACTICS INSTRUCTOR (WTI)														
WTI	5999	WTI	*		*				MAWTS-1 COURSE CATALOG		E			608
			8.0											
			20.0											

KC-130T LOADMASTER													
6000 REQUIREMENTS / QUALIFICATIONS / DESIGNATIONS PHASE													
STAGE	TRNG CODE	EVENT DESC	FLIGHT HOURS	SIMULATOR HOURS	REFLY INTERVAL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVALUATION	OPTIONS	CHANNING
EVENT CONVERSION													
NATOPS (NTPS)													
NTPS	6010	OPEN BOOK			365					SC,R	E		
NTPS	6011	CLOSED BOOK			365					SC,R	E		
NTPS	6012	ORAL EXAM			365					SC,R	E		
NTPS	6118	NATOPS EVAL	3.0		365	A	1	(N)	Core Skill Introduction complete, 6010, 6011, 6012	SC,R	E		690
			3.0										
REFUELING SUPERVISOR (RS)													
RS	6660	DAY RS	2.0		180	A	1	D	3660, 3651	R			3660
RS	6650	NS RS	2.0		180	A	1	NS	6660	R			2150, 3660, 3651, 6660
			4.0										
QUALITY ASSURANCE SAFETY OFFICER (QASO)													
QASO	6710	QASO	3.0		180	A	1	N	4710, (2150 IF NS)	R			4710, (2150 IF NS)
			3.0										
			10.0										

614. SYLLABUS EVALUATION FORMS. MAWTS-1, the syllabus sponsor, maintains and updates training and readiness grade sheets.

615. KC-130J TO KC-130T EQUIVALENCY MATRIX

KC-130J TO KC-130T EQUIVALENCY MATRIX		
KC-130J T&R EVENT		KC-130T T&R EVENT
<b>2000 PHASE</b>		
NS 2150	↔	NS 2150
LRN 2162	↔	LRN 2160
TN 2201	↔	TN 2200
TN 2250	↔	TN 2250
LAT 2261	↔	LAT 2260
TR 2400	↔	TR 2400
<b>3000 PHASE</b>		
ALZ 3502	↔	ALZ 3500
ALZ 3503	↔	ALZ 3501
CPL 3510 & CPL 3511	↔	CPL 3510
CPL 3512	↔	CPL 3511
CPL 3513	↔	CPL 3512
AAR 3600	↔	AAR 3600
AAR 3601	↔	AAR 3601
AAR 3650	↔	AAR 3650
RGR 3661	↔	RGR 3660
RGR 3651	↔	RGR 3651
AD 3702	↔	AD 3700
AD 3703	↔	AD 3701
AD 3704	↔	AD 3702
<b>4000 PHASE</b>		
NS(L) 4251	↔	N/A
DT 4411	↔	DT 4410
AD 4700	↔	AD 4700
AD 4701	↔	AD 4701
BI 4710	↔	BI 4710
<b>5000 PHASE</b>		
LMI 5100	↔	LMI 5100
LMI 5101	↔	LMI 5101
LMI 5102	↔	LMI 5102
NI 5140	↔	NI 5140
NI 5141	↔	NI 5141
NS 5150	↔	NSI 5150
NS 5151	↔	NSI 5151
NS 5152	↔	NSI 5152
WTI 5999	↔	WTI 5999
<b>6000 PHASE</b>		
NTPS 6010	↔	NTPS 6010
NTPS 6011	↔	NTPS 6011
NTPS 6012	↔	NTPS 6012
NTPS 6118	↔	NTPS 6118
RS 6662	↔	RS 6660
RS 6652	↔	RS 6650
QASO 6710	↔	QASO 6710

CHAPTER 7

KC-130T CREWMASTER

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INDIVIDUAL CORE SKILL PROFICIENCY (CSP) ATTAIN TABLE KC-130T Crewmaster				
T&R events required to Attain CSP (2000 Phase)				
NS	LRN	TN	LAT	IR TR
2150R	2162R	2201	2261R	2400R
		2250R		
Gray highlight & an R suffix on the event code = Refresher POI				
An S prefix on the event code = Event conducted in a simulator				

2. Events Required to Maintain Individual CSP. To maintain CSP in a Core Skill, an individual must maintain proficiency in all 2000 phase T&R events listed for that Core Skill:

INDIVIDUAL CORE SKILL PROFICIENCY (CSP) MAINTAIN TABLE KC-130T Crewmaster				
T&R events required to Maintain CSP (2000 Phase)				
NS	LRN	TN	LAT	IR TR
2150R	2162R	2250R	2261R	2400R
Gray highlight & an R suffix on the event code = Refresher POI				
An S prefix on the event code = Event conducted in a simulator				

703. INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) REQUIREMENTS. A MSP crew consists of individuals representing each crew position who have achieved and currently maintain individual MSP. To be considered proficient in a Mission Skill, an individual must attain and maintain proficiency in Mission Skill events as delineated in the paragraphs.

1. Events Required to Attain Individual MSP. To initially attain MSP in a Mission Skill, an individual must simultaneously have a proficient status in all 3000 phases T&R events listed for that Mission Skill:

INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) ATTAIN TABLE KC-130T Crew Master				
T&R events required to Attain MSP (3000 Phase)				
ALZ	CPL	AAR	RGR	AD
3502R	3510R	3600	3661	3702R
3503R	3511R	3601	3651R	3703R
3504R	3512R	3650R		3704R
3550R	3513R			
Gray highlight & an R suffix on the event code = Refresher POI				
An S prefix on the event code = Event conducted in a simulator				

2. Events Required to Maintain Individual MSP. To maintain MSP in a Mission Skill, an individual must maintain proficiency in all 3000 phase T&R events listed for that Mission Skill:

INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) MAINTAIN TABLE KC-130T Crew Master				
T&R events required to Maintain MSP (3000 Phase)				
ALZ	CPL	AAR	RGR	AD
3502R	3510R	3650R	3651R	3702R
3503R	3511R			3703R
3504R	3512R			3704R
3550R	3513R			
Gray highlight & an R suffix on the event code = Refresher POI				
An S prefix on the event code = Event conducted in a simulator				

3. Events Required to Attain Individual Proficiency in Core Plus Skills. Proficiency in Core Plus Skills is not required to obtain unit CSP. Training to Core Plus Skills is at the discretion of the unit commanding officer. To Initially attain proficiency in a Core Plus Skill, an individual must simultaneously have a proficient status in all T&R events listed for that Core Plus Skill:

INDIVIDUAL CORE PLUS SKILL PROFICIENCY ATTAIN TABLE KC-130T Crew Master		
T&R events required to Attain Core Plus Proficiency (4000 Phase)		
DT	AD	BI
4411R	4700R	4710R
	4701R	
Gray highlight & an R suffix on the event code = Refresher POI		
An S prefix on the event code = Event conducted in a simulator		

4. Events Required to Maintain Individual Proficiency in a Core Plus Skills. To maintain proficiency in a Core Plus Skill, an individual must maintain proficiency in all T&R events listed in the table below for that Core Plus Skill:

INDIVIDUAL CORE PLUS SKILL PROFICIENCY MAINTAIN TABLE KC-130T Crew Master		
T&R events required to Maintain Core Plus Proficiency (4000 Phase)		
DT	AD	BI
4411R	4700R	4710R
	4701R	
Gray highlight & an R suffix on the event code = Refresher POI		
An S prefix on the event code = Event conducted in a simulator		

704. QUALIFICATION AND DESIGNATIONS. The tables below delineate T&R events required to be completed to attain proficiency, and initial qualifications and designations. In addition to event requirements all required stage lectures, briefs, squadron training, prerequisites, and other criteria shall be completed prior to completing final events. Certification, Qualification and designation letters signed by the commanding officer shall be placed in Individual Performance Records (IPR). Loss of proficiency in all qualification events causes the associated qualification to be lost. Regaining a qualification requires completing all R-coded syllabus events associated with that qualification.



INDIVIDUAL QUALIFICATION REQUIREMENTS	
Qualification	Event Requirements
NATOPS CM	IAW OPNAVINST 3710.7_, and Core Skill Introduction complete.
Night Systems Qualification	2150, IAW the MAWTS-1 KC-130T Course Catalog, 10 Hours NVD Time (Min 5 hours LLL).
Day Refueling Supervisor	RGR 3661, and RGR RS 6662
NS Refueling Supervisor	RGR 3661, RGR 3651, RGR 6662 and RGR RS 6652
Quality Assurance Safety Observer	BI 4710, and QASO 6653
R = Refresher POI events for re-qualification	

INDIVIDUAL DESIGNATION REQUIREMENTS	
Designation	Event Requirements
CPLI	IUT 5101, MIN 750 Hours, and 2000 - 3000 Complete
FAMI	IUT 5101, MIN 750 Hours, and 2000 - 3000 Complete
ADI	IUT 5101, CPLI, MIN 1000 Hours, and 2000 - 4000 Complete
FEI	Qualified per NAVMC 3500.52A
LMI	Qualified per NAVMC 3500.52A
ANI NI	NI 5140, NI 5141, IAW OPNAVINST 3710.7_ and MIN 1500 Hours
NSI	2150, 5150, 5151, IAW the MAWTS-1 KC-130T Course Catalog
WTI	IAW the MAWTS-1 WTI Course Catalog and MIN 2000 Hours

## 705. PROGRAMS OF INSTRUCTION

### 1. Basic, Transition POI

Weeks	Course/Level	Activity
1-6	Naval Aircrewman Candidate School	NAS Pensacola, FL
7-9	Survival, Evasion, Resistance, and Escape Course	NAS North Island, CA Portsmouth Naval Shipyard, NH
10-23	KC-130J Crewmaster Organizational Ground Maintenance Course "A & C" School	Little Rock AFB, AR
24-26	USAF Basic Loadmaster Course	Little Rock AFB, AR
27-40	USAF Loadmaster Initial Qualification Course	Little Rock AFB, AR
41-77	Core Skill Introduction Training	Tactical Squadron

78-117	Core Skill Training	Tactical Squadron
118-157	Mission Skill Training Minus Air Delivery	Tactical Squadron
158-227	Core Skill Plus Training Minus Air Delivery	Tactical Squadron
228-235	USAF Loadmaster Mission Qualification Course (Aerial Delivery Training)	Little Rock AFB, AR

## 2. Series Conversion POI

a. KC-130T qualified Flight Mechanics will be trained at the Tactical Squadron in Loadmaster BLM and RFIQ course. Once complete they will be assigned the series conversion POI and only conduct events FAM-1510 thru 1515 and NATOPS evaluation to qualify as CM. Previously qualified KC-130T Flight Mechanics should attend the Loadmaster LMQ (Air Delivery) course at Little Rock AFB.

b. KC-130T qualified Loadmasters will be assigned the series conversion POI and only conduct events FAM-1000 thru FAM-1108, and NATOPS evaluation to qualify as CM.

c. KC-130J qualified Crewmasters who have not previously attended, should attend the Loadmaster LMQ (Air Delivery) course at Little Rock AFB, AR prior to assignment at a KC-130T squadron.

Weeks	Course/Level	Activity
1-8	USAF C-130 Loadmaster Mission Qualification Course (Air Delivery Training)	Little Rock AFB
9-13	Approved Ground Maintenance System Course	Tactical Squadron
9-13	Approved Basic Loadmaster Course	Tactical Squadron
14-40	Core Skill Introduction Training	Tactical Squadron
41-49	Core Skill Training	Tactical Squadron
50-66	Mission Skill Training	Tactical Squadron
67-83	Core Skill Plus Training	Tactical Squadron

### 3. Refresher POI

Weeks	Course/Level	Activity
1-2	Academic Ground Training	Tactical Squadron
3-8	Core Skill Introduction Training	Tactical Squadron
9-25	Core Skill Training	Tactical Squadron
26-45	Mission Skill Training	Tactical Squadron
46-86	Core Skill Plus Training	Tactical Squadron

### 4. Instructor POI

Weeks	Course/Level	Activity
1	Standardization Training	Tactical Squadron
2-4	Flight Training	Tactical Squadron

### 706. ACADEMIC TRAINING

1. Academic training shall be conducted for each phase/stage of the syllabus. Where indicated, standardized academic training materials exist and may be obtained from the sponsoring activity.

2. External academic courses of instruction available to complete the syllabus are listed below

<u>Course</u>	<u>Activity</u>
Naval Aircrewman Candidate School (NACMS)	NAS Pensacola, FL
Survival, Evasion, Resistance, and Escape Course	NAS North Island, CA
	Portsmouth Naval Shipyard, NH
Weapons and Tactics Instructor Course	MAWTS-1
C-130 Loadmaster Mission Qualification Course (LMQ)	Little Rock AFB, AR
Night Imaging and Threat Evaluation (NITE) Lab	Tactical Squadron
Basic Instructor Training Course	MCAS New River, NC
Crew Resource Management Instructor	NAS Pensacola, FL or Mobile Training Team
Advanced Airlift Tactical Training Course (AATTC)	St. Joseph, MO

3. The following external training courses are recommended in addition to the syllabus:

<u>Course</u>	<u>Activity</u>
Environmental Survival Course	Regional / seasonal survival schools
Joint Airdrop Inspector Course	Ft. Lee, VA
Hazardous Materials Preparer Course	MCAS New River, NC
Forklift Operators Course	Base Motor Transport
Aircraft Weight and Balance Course	MCAS Cherry Point NC, NAS Norfolk, VA

4. The following Aircrew Training references shall be used to ensure safe and standardized training, grading criteria, and aircraft operation:

NATOPS General Flight and Operating Instructions (OPNAVINST 3710.7\_)  
 NATOPS Flight Manuals (NFM)  
 KC-130 ANTP Series (TACMAN)  
 Aviation T&R Program Manual  
 Crew Resource Management Program Manual (OPNAVINST 1542.7\_)  
 MAWTS-1 KC-130T Course Catalog  
 MAWTS-1 WTI Course Catalog  
 Allied Tactical Publication - 56 (ATP-56) Air to Air Refueling  
 FMFM 10-500 Series Air Delivery Rigging Manuals (as applicable)  
 NAVAIR KC/C-130 NAVAIR 01-75GAA-9s  
 Flight Clearances (FC) - issued by NAVAIR

#### 707. CORE SKILL INTRODUCTION PHASE

##### 1. General

a. The Crewmaster will be capable of basic duties to include normal and emergency procedures and CRM after successful completion of a NATOPS evaluation. CMUI's shall attend NITE Laboratory within this phase of training.

b. Stages. Familiarization, Night Systems, Tactical Navigation, Cargo and Passenger Loading, and Air to Air Refueling.

##### 2. Familiarization (FAM)

a. Purpose. Train the CMUI to perform the basic NATOPS flight crew requirements, weight and balance, aircraft preflight, systems operation, system malfunctions, corrective actions, fault isolation, location and use of emergency equipment, ground and in-flight emergency procedures, and aircraft post flight procedures.

b. General. Upon completion of this phase of training the Crewmaster under instruction (CMUI) will possess a general understanding of squadron and aircraft operations to include emergency procedures.

c. Crew Requirements. Familiarization Instructor (FAMI), Flight Engineer Instructor (FEI), Loadmaster Instructor (LMI), Cargo Passenger Loading Instructor (CPLI), and a Night Systems Instructor (NSI) depending on event.

d. Academic Training. Prior to FAM-1000 complete, ground school courses consisting of basic aircraft systems descriptions, crew resource management, operational risk management, basic weight and balance, aircraft pre-flight and post-flight procedures, normal and emergency procedures, and the donning and use of all emergency equipment. Utilize academic courseware as outlined in the MAWTS-1 KC-130T Course Catalog and as directed by the Aviation Training Unit.

FAM-1000	4.0	*	B,SC	1	WST/KC-130T	S/A	D
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Goal. Introduce CMUI to the aircraft, flight line, and squadron operations.

Requirement. The CMUI, under the direct supervision of FAMI, FEI, or LMI, will receive an introduction to the squadron operational environment to include maintenance control, quality assurance, tool room, work centers, hangar area, and the flight line. The CMUI will receive an introduction to the aircraft to include general information concerning the mission and capabilities of the aircraft. The CMUI will be shown the exterior, interior, and the flight station with power applied. The CMUI will also be given detailed instruction on hazard areas, emergency signals, ground evacuation, and personal protective equipment (PPE).

Performance Standard. Satisfactory completion per NFM, SOP, and associated MIMs.

Prerequisites. Squadron and Work Center Indoctrination Training to include Active, Standing, and Safety Required Reading Boards and the Squadron SOP.

FAM-1100	4.0	*	B,SC	1	KC-130T	A/S	D
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Goal. Pre-Flight Introduction, and Weight and Balance.

Requirement. The CMUI, under the direct supervision of a FAMI, CPLI, LMI or FEI will be introduced to an aircraft preflight, complete a Weight and Balance Form F, and post-flight inspection. The CMUI will receive instruction on flight preparation and operation. The CMUI will demonstrate normal and emergency procedures, ICS/Radio procedures, checklist challenge and response calls, engine start procedures and malfunctions, walk around checks, and in-flight responsibilities.

Performance Standard. Satisfactory completion per NFM and associated MIMs.

Prerequisites. FAM-1000

FAM-1101	4.0	*	B,SC	1	KC-130T	A/S	D
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Goal. Pre-Flight, and Weight and Balance.

Requirement. The CMUI, under the direct supervision of a FAMI, CPLI, LMI or FEI will conduct an aircraft preflight, complete a

Weight and Balance Form F, and post-flight inspection. The CMUI will receive instruction on flight preparation and operation. The CMUI will demonstrate normal and emergency procedures, ICS/Radio procedures, checklist challenge and response calls, engine start procedures and malfunctions, walk around checks, and in-flight responsibilities.

Performance Standard. Satisfactory completion per NFM and associated MIMs.

Prerequisites. FAM-1100

FAM-1102	4.0	*	B,SC	1	KC-130T	A	(N)
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Goal. Engine Systems.

Requirement. The CMUI, under the direct supervision of a FAMI or FEI, will perform, discuss, and demonstrate normal and emergency procedures as it pertains to the engine system.

Performance Standard. Satisfactory completion per NFM and associated MIMs.

Prerequisites. FAM-1100

FAM-1103	4.0	*	B,SC	1	KC-130T	A	(N)
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Goal. Propeller Systems.

Requirement. The CMUI, under the direct supervision of a FAMI or FEI, will perform, discuss, and demonstrate normal and emergency procedures as it pertains to the propeller System.

Performance Standard. Satisfactory completion per NFM and associated MIMs.

Prerequisites. FAM-1100

FAM-1104	4.0	*	B,SC	1	KC-130T	A	(N)
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Goal. AC/DC Systems.

Requirement. The CMUI, under the direct supervision of a FAMI or FEI, will perform, discuss, and demonstrate normal and emergency procedures as it pertains to the AC/DC control systems.

Performance Standard. Satisfactory completion per NFM and associated MIMs.

Prerequisites. FAM-1100

FAM-1105	4.0	*	B,SC	1	KC-130T	A	(N)
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Goal. Air Conditioner, O2, and Bleed Air Systems.

Requirement. The CMUI, under the direct supervision of a FAMI or FEI, will perform, discuss, and demonstrate normal and emergency procedures as it pertains to the Air Conditioner, O2, and Bleed air and Ice Protection systems.

Performance Standard. Satisfactory completion per NFM and associated MIMs.

Prerequisites. FAM-1100

FAM-1106	4.0	*	B,SC	1	KC-130T	A	(N)
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Goal. Fuel Systems.

Requirement. The CMUI, under the direct supervision of a FAMI or FEI, will perform, discuss, and demonstrate normal and emergency procedures as it pertains to the Fuel Systems.

Performance Standard. Satisfactory completion per NFM and associated MIMs.

Prerequisites. FAM-1100

FAM-1107	4.0	*	B,SC	1	KC-130T	A	(N)
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Goal. Hydraulic Systems.

Requirement. The CMUI, under the direct supervision of a FAMI or FEI, will perform, discuss, and demonstrate normal and emergency procedures as it pertains to the hydraulic systems.

Performance Standard. Satisfactory completion per NFM and associated MIMs.

Prerequisites. FAM-1100

FAM-1108	4.0	*	B,SC	1	KC-130T	A	(N)
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Goal. Communication, Navigation, and High Frequency Radios Systems.

Requirement. The CMUI, under the direct supervision of a FAMI, LMI or FEI, will perform, discuss, and demonstrate normal and emergency procedures as it pertains to the Communication, Navigation, and High frequency radio systems.

Performance Standard. Satisfactory completion per NATOPS Flight Manual (NFM), Standard Operating Procedures (SOP), and associated Maintenance Instruction Manuals (MIMS).

Prerequisites. FAM-1100

## 2. Night Systems (NS)

- a. Purpose. To introduce the use of night vision devices (NVD).

b. General. Crewmasters conducting NS training shall be instructed by a Night Systems Instructor (NSI) for this stage.

c. Academic Training. MAWTS-1 NVD ASP courses and NITE lab.

NS-1150	2.0	*	B	1 OPTT/KC-130T	S/A	NS
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Goal. To introduce the CMUI the use of NVD in the High Light Level (HLL) environment.

Requirement. The NSI will discuss NVD features and characteristics, followed by inspection/adjustment. The CMUI will be given an exterior lighting demonstration with NVDs. Emphasize aircraft lighting in normal, NVIS, covert modes, and variations that occur with different terrain/water, cultural lighting and contrast under high light conditions.

Performance Standard. Satisfactory completion per NFM, KC130 ANTTP, SOP, and OPNAVINST 3710.7\_.

Prerequisite. MAWTS-1 NVD ASP ground instruction, NITE lab, CBT, and FAM-1108.

NS-1151	2.0	*	B	1 OPTT/KC-130T	S/A	NS
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Goal. To introduce the CMUI the use of NVD in the Low Light Level (LLL) environment.

Requirement. Conduct all operations included in NS-1150 under LLL conditions.

Performance Standard. Satisfactory completion per NFM, KC130 ANTTP, SOP, and OPNAVINST 3710.7\_.

Prerequisite. NS-1150.

### 3. Tactical Navigation (TN)

a. Purpose. Introduce the CMUI to the skills and duties of aft lookout doctrine in the tactical navigation environment.

b. General. The CMUI will be introduced to the hazards associated with the low level environment.

c. Crew Requirements. FAMI, FEI, or LMI.

d. Academic Training. Utilize academic courseware as outlined in the appropriate chapter of the MAWTS-1 KC-130T Course Catalog.

TN-1200	2.0	*	B	1	KC-130T	A	D
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Goal. Introduce the duties of an aft lookout observer during a day tactical navigation mission.

Requirement. The CMUI will perform the duties of an aft lookout observer during a day tactical navigation mission, perform cargo compartment preparation, attend crew briefing, discuss lookout



doctrine, scan for threats and terrain clearance, crew coordination and combat entry/exit checklists.

Performance Standard. Satisfactory completion per NFM, KC130 ANTPP, SOP, and OPNAVINST 3710.7 .

Prerequisite. FAM-1101

#### 4. Cargo and Passenger Loading (CPL)

a. Purpose. Refresh the CMUI in cargo and passenger loading. A load simulator is the preferred training device for this stage. A KC-130T aircraft may be used as a substitute. At the end of this phase of instruction the CMUI will be familiar with cargo/passenger loading techniques, such as:

(1) Preflight and configure an aircraft per mission requirements for flights involving passengers and/or cargo.

(2) Determine available seating and/or cargo space for load planning purposes.

(3) Utilize all KC-130 loading aids conforming to the limitations, installations, and usage of each PER NAVAIR 01-75GAA-9.

(4) Safely load and off-load cargo per NAVAIR 01-75GAA-9.

(5) Compute weight and balance for a simulated flight transporting a passenger/cargo payload.

(6) Hazardous Cargo considerations will be discussed throughout this stage with emphasis on compatibility and cargo jettison.

(7) Post-flight cargo compartment.

b. General. The CMUI will demonstrate a general understanding of basic cargo and passenger loading.

c. Crew Requirements. CPLI or LMI.

d. Flight/Ground/Simulator Event Training. (6 Events, 24.0 hours).

CPL-1510	4.0	*	B,SC	1 FUT/KC-130T	S/A	(N)
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Goal. Discuss and demonstrate loading passengers and baggage.

Requirement. Discuss and demonstrate aircraft configuration for a flight transporting the maximum load allowable with passengers and baggage, passenger brief and accurate passenger manifesting. The CMUI will demonstrate the installation of centerline & sidewall seats, seat spacing configurations, as well as aeromedical considerations. The CMUI will prepare a Form F. Tanker frame considerations will be discussed.

Performance Standard. Satisfactory completion per NFM, NAVAIR 01-75GAA-9, ANTPP, SOP, and OPNAVINST 3710.7\_.

CPL-1511	4.0	*	B,SC	1 FUT/KC-130T	S/A	(N)
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Goal. Discuss and demonstrate procedures for rolling stock cargo.

Requirement. Discuss and demonstrate aircraft configuration for a flight transporting rolling stock, winching procedures, limitations, and loading & tie down procedures. The CMUI will prepare a Form F. In-flight cargo jettison procedures will be thoroughly discussed.

Performance Standard. Satisfactory completion per NFM, NAVAIR 01-75GAA-9, SOP, and OPNAVINST 3710.7\_.

External Syllabus Support. MWSS Support.

CPL-1512	4.0	*	B,SC	1 FUT/KC-130T	S/A	(N)
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Goal. Perform loading procedures for palletized cargo.

Requirement. Perform aircraft configuration for a flight transporting rolling stock, winching procedures, limitations, and loading & tie down procedures. The CMUI will prepare a Form F. In-flight cargo jettison procedures will be thoroughly explained by the CMUI.

Performance Standard. Satisfactory completion per NFM, NAVAIR 01-75GAA-9, SOP, and OPNAVINST 3710.7\_.

External Syllabus Support. MWSS Support.

CPL-1513	4.0	*	B,SC	1 KC-130T	A	(N)
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Goal. Discuss and demonstrate rolling stock loading procedures.

Requirement. Discuss and demonstrate aircraft configurations for a flight transporting rolling stock cargo. Discuss tanker considerations, demonstrate preflight and post flight & operation of the dual rail system. The CMUI will prepare a Form F. In-flight cargo jettison procedures will be thoroughly explained by the CMUI.

Performance Standard. Satisfactory completion per NFM, NAVAIR 01-75GAA-9, SOP, and OPNAVINST 3710.7\_.

External Syllabus Support. MWSS Support.

Prerequisite. FAM-1101

CPL-1514	4.0	*	B,SC	1 KC-130T	A	(N)
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Goal. Perform palletized cargo loading procedures.

Requirement. Perform aircraft configurations for a flight transporting palletized cargo. Discuss tanker considerations,

demonstrate preflight and postflight & operation of the dual rail system. A forklift should be used as the primary loading vehicle. The CMUI will prepare a Form F. In-flight cargo jettison procedures will be thoroughly explained by the CMUI.

Performance Standard. Satisfactory completion per NFM, NAVAIR 01-75GAA-9, SOP, and OPNAVINST 3710.7\_.

External Syllabus Support. MWSS Support.

Prerequisite. FAM-1101

CPL-1515	4.0	*	B,SC	1	KC-130T	A	(N)
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Goal. Perform loading procedures for passengers and cargo.

Requirement. Perform aircraft configurations for a flight transporting both passengers with rolling stock and/or palletized cargo. Explain tanker considerations, winching procedures, limitations, and loading & tie down procedures. Perform preflight and post flight & operation of the dual rail system. A forklift should be used as the primary loading vehicle for palletized cargo. The CMUI will prepare a Form F. In-flight cargo jettison procedures will be thoroughly explained by the CMUI.

Performance Standard. Satisfactory completion per NFM, NAVAIR 01-75GAA-9, SOP, and OPNAVINST 3710.7\_.

External Syllabus Support. MWSS Support.

Prerequisite. FAM-1101, CPL-1510, 1511, CPL-1512, and CPL-1514.

#### 5. Air to Air Refueling (AAR)

a. Purpose. Familiarize Crewmasters with basic air to air refueling procedures and terminology.

b. General. Train the CMUI to perform the duties of an in-flight refueling observer. At the end of this phase of training the CMUI will be able to:

- (1) Preflight the aircraft per specific mission requirements.
- (2) Compute and file an accurate weight and balance form for the aircraft.
- (3) Perform duties as an in-flight refueling observer during hose operation, informing the Aircraft Commander of the status of the refueling system and position of receiver aircraft.
- (4) Correctly perform all related emergency procedures.

c. Crew Requirements. FAMI, FEI, or LMI.

d. Academic Training. The CMUI shall be familiar with the NFM, ANTTP, ATP-56, associated MAWTS-1 courseware that relates to the Air to Air refueling environment, and CBT's.

e. Flight/Ground/Simulator Event Training. (3 Events, 6.0 hours).

AAR-1600	2.0	*	B	1 KC-130T	A	D
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Goal. Introduce and review the duties of an in-flight refueling observer during a day fixed-wing or tilt rotor AAR mission.

Requirement. The CMUI will perform refueling observer duties during a day AAR mission. The observer should respond to all ICS and radio transmissions during the entire evolution. The CMUI will demonstrate a thorough understanding of all air to air refueling terminology and the use of EMCON procedures.

Performance Standard. Satisfactory completion of procedures per the NFM, ANTTP, and ATP-56B.

Prerequisite. FAM-1100

External Syllabus Support. Fixed Wing or Tilt/Rotor receiver.

AAR-1601	2.0	*	B	1 KC-130T	A	D
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Goal. Introduce and review the duties of an in-flight refueling observer during a day helicopter air to air refueling mission.

Requirement. The CMUI will perform refueling observer duties during a day air to air refueling mission. The observer should respond to all ICS and radio transmissions during the entire evolution. The CMUI will demonstrate a thorough understanding of all air to air refueling terminology and the use of EMCON procedures.

Performance Standard. Satisfactory completion of procedures per the NFM, ANTTP, and ATP-56B.

Prerequisite. FAM-1100

External Syllabus Support. Helicopter Receiver.

AAR-1602	2.0	*	B,SC	1 KC-130T	A	D
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Goal. Evaluate CMUI on the duties of an in-flight refueling observer during a day fixed-wing, tilt rotor or HAAR mission.

Requirement. The CMUI will perform refueling observer duties during a day air to air refueling mission. The observer should respond to all ICS and radio transmissions during the entire evolution. The CMUI will demonstrate a thorough understanding of all air to air refueling terminology and the use of EMCON procedures.

Performance Standard. Satisfactory completion of procedures per the ANTPP.

Prerequisite. FAM-1101, AAR 1600 & 1601

External Syllabus Support. Fixed Wing, Tilt-Rotor or Helicopter Receiver.

## 708. CORE SKILL PHASE

### 1. General

a. Upon completion of this phase of training, the Crewmaster will be qualified in Core Skills. These skills include Night Systems (NS), Long Range Navigation (LRN), Tactical Navigation (TN), day low altitude Tactics (LAT), and ground based Threat Reaction (TR). CMUI shall attend NITE Laboratory within this phase of training. When the Crewmaster has completed the RQD-6118 and subsequent initial events have been successfully accomplished the Crewmaster is qualified in that event.

b. Stages. Night Systems, Long Range Navigation, Tactical Navigation, Low Altitude Tactics, Threat Reaction.

### 2. Night Systems (NS)

a. Purpose. To introduce the use of night vision devices (NVD).

b. General. Crewmasters conducting NS training shall be instructed by a Night Systems Instructor (NSI) for this stage.

c. Academic Training. MAWTS-1 NVD ASP courses and NITE lab.

NS-2150	2.0	365	B,SC,R	1 KC-130T	A	NS
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Goal. To qualify or maintain proficiency in NS operations.

Requirement. The CMUI will demonstrate NVD features and characteristics, followed by inspection/adjustment. Emphasize aircraft lighting in normal, NVIS, covert modes, and variations that occur with different terrain/water, cultural lighting and contrast under high or low light conditions.

Performance Standard. Satisfactory completion per Fixed Wing NVD Manual, NFM, ANTPP, and OPNAVINST 3710.7\_.

Prerequisite. NS-1150, NS-1151 and 10 hours of NVD time (5 shall be in low-light conditions).

### 3. LONG RANGE NAVIGATION (LRN)

a. Purpose. Train the Crewmaster in requirements for OCONUS operations.

b. General. This stage should have, at least, one mission that remains overnight outside the continental United States and requires clearing customs in a foreign country.

c. Academic Training. CMUI will receive instruction in the use of the Foreign Clearance Guide (FCG), Flight Information Handbook (FIH), and International Civil Aviation Organization (ICAO) procedures.

LRN-2162	6.0	730	B,SC,R	1 KC-130T	A	(N)
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Goal. Introduce, qualify, or maintain proficiency for long range navigation.

Requirement. The CMUI, under the direct supervision of a LMI or FEI, will perform all duties as a Crewmaster for LRNAV operations. The CMUI will demonstrate a thorough understanding of deployed GMS/PMA capabilities, ability to coordinate ground support and logistics as they pertain to maintenance considerations, overwater aircraft preflight, normal and alternate fuel management procedures, emergency equipment, and customs and agriculture planning.

Performance Standard. Per the NFM and pertinent ICAO publications.

#### 4. Tactical Navigation (TN)

a. Purpose. To qualify or maintain proficiency for the Low Level qualified Crewmaster in the tasks and requirements associated with low level flights.

b. Crew Requirements. FAMI, FEI, or LMI depending on event.

c. Academic Training. Review NATOPS Flight Manual, ANTP, CBT's and MAWTS-1 ASP Low Level Navigation Courseware.

TN-2201	2.0	365	B,SC	1 KC-130T	A	D
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Goal. Qualify or maintain proficiency in TN aft lookout duties.

Requirement. The CMUI, under the direct supervision of a FAMI, FEI, or LMI, will perform the duties of an aft lookout during a day TN mission. Conduct cargo compartment preparation, crew briefing, lookout doctrine, scan for threats and terrain clearance, crew coordination and combat entry/exit checklists.

Performance Standard. Satisfactory completion of the procedures per the NFM and ANTP.

Prerequisite.

TN-2250	2.0	365	B,R	1 KC-130T	A	NS
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Goal. Qualify or maintain proficiency in TN aft lookout duties using NVDs.

Requirement. The CMUI, under the direct supervision of a FAMI, FEI, or LMI, will perform the duties of an aft lookout during a TN mission using NVDs. Conduct cargo compartment preparation, crew

briefing, lookout doctrine, scan for threat, crew coordination and combat entry/exit checklists.

Performance Standard. Satisfactory completion of the procedures per the NFM and ANTP standards.

Prerequisite. MAWTS-1 approved ground course, NS-2150, TN-2201.

#### 5. Low Altitude Tactics (LAT)

a. Purpose. To introduce, qualify, or to maintain proficiency for the LAT Crewmaster in the tasks and requirements associated with flying in the LAT environment.

b. General. This stage of instruction shall be taught locally per the MAWTS-1 ASP, or in conjunction with AATTC.

c. Crew Requirements. WTI, FEI, or LMI depending on event.

d. Academic Training. MAWTS-1 ASP courseware for LAT and review ANTP.

LAT-2261	2.0	365	B,R	1 KC-130T	A	D
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Goal. Qualify or maintain proficiency in the duties as an aft lookout during the low altitude tactics mission.

Requirement. The CMUI, under the direct supervision of a WTI, FEI, or LMI, will perform the duties of an aft lookout during a LAT mission. Conduct cargo compartment preparation, crew briefing, lookout doctrine, scan for threats, crew coordination, and perform combat entry/exit checklists.

Performance Standard. Per the NFM and ANTP.

Prerequisite. TN-2201

External Syllabus Support. LAT approved course.

#### 6. Threat Reaction (TR)

a. Purpose. Introduce, qualify, or maintain proficiency in the use of defensive maneuvering coordinated with Aircraft Survivability Equipment (ASE) suite against surface-to-air threat systems.

b. General

- (1) Aircraft must have fully operational ASE suite.
- (2) Appropriate decoy flares must be loaded prior to flight.
- (3) Threat emitters should be available.

c. Crew Requirements. WTI, FEI, or LMI depending on event.

d. Academic Training. The Crewmaster shall review pertinent chapters in the ANTP, receive the appropriate MAWTS-1 ASPs, and CBTs.

TR-2400      2.0      365      B,R      1 KC-130T      A      (N)

Goal. Introduce, qualify, or maintain proficiency in the aft lookout duties as they pertain to surface to air threats.

Requirement. The CMUI, under the direct supervision of a WTI, FEI, or LMI, will demonstrate the use of the ASE in combination with tactical maneuvering to defeat a ground-based threat. Preflight of ASE will be conducted.

Performance Standard. Satisfactory execution of procedures per the MAWTS-1 ASP, NFM, and ANTP.

Prerequisite. (2150).

Ordinance. Chaff and flare expendables

External Syllabus Support. ASE range.

709. MISSION SKILL PHASE

1. General

a. Upon completion of this phase of training, the Crewmaster will be qualified in Mission Skills. These skills include Assault Landing Zone (ALZ), Cargo and Passenger Loading (CPL), Air-to-Air Refueling (AAR), Rapid Ground Refueling (RGR), and Air Delivery (AD).

b. Stages. Assault Landing Zone, Cargo and Passenger Loading, Air to Air Refueling, Rapid Ground Refueling, and Air Delivery.

2. Assault Landing Zone (ALZ)

a. Purpose. Introduce day and night ALZ operations, culminating in aircraft preparation, combat offload, and the introduction of the use of NVDs in the ALZ environment.

b. Crew Requirement. CPLI, FEI, or LMI depending on event.

c. Academic Training. Review ALZ operations in ANTP. Review MAWTS-1 ASP ALZ courseware.

ALZ-3502      1.0      365      B,SC,R      1 KC-130T      A      (N)

Goal. Qualify or maintain proficiency in Combat Offload (COL).

Requirement. The CMUI, under the direct supervision of a CPLI or LMI, will demonstrate the ability to prepare the cargo compartment for ALZ operations, conduct a COL, and direct the pilot in reverse taxi procedures.

Performance Standard. Satisfactory completion of the procedures per the NFM, ANTP.

Prerequisite. (NS(H)-2150), CPL-3512

External Syllabus Support. Material Handling Equipment (MHE).



ALZ-3503	1.0	365	B,SC,R	1 KC-130T	A	D
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Goal. Qualify or maintain proficiency in day ALZ Operations.

Requirement. The CMUI, under the direct supervision of a WTI or FEI, will demonstrate procedures for preparation of the cargo compartment and aircraft exterior for unimproved ALZ operations.

Performance Standard. Satisfactory completion of the procedures per the NFM, ANTTP.

Prerequisite. CBT.

External Syllabus Support. USMC MMT, MWSS, EAF or USAF Combat Control Team with appropriate expeditionary airfield ALZ Marking/Lighting and ARFF Support.

ALZ-3504	1.0	365	B,SC,R	1 KC-130T	A	(N)
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Goal. Qualify or maintain proficiency in ERO Operations.

Requirement. The CMUI, under the direct supervision of a WTI or CPLI, will demonstrate procedures for preparation of the cargo compartment and aircraft exterior for unimproved ALZ operations.

Performance Standard. Satisfactory completion of the procedures per the NFM, ANTTP.

Prerequisite. (NS-2150)

External Syllabus Support. USMC MMT, MWSS, EAF or USAF Combat Control Team with appropriate expeditionary airfield ALZ Marking/Lighting and ARFF Support.

ALZ-3550	1.0	365	B,SC,R	1 KC-130T	A	NS
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Goal. Qualify or maintain proficiency in night ALZ Operations.

Requirement. The CMUI, under the direct supervision of a WTI or FEI, will demonstrate procedures for preparation of the cargo compartment and aircraft exterior for unimproved ALZ operations.

Performance Standard. Satisfactory completion of the procedures per the NFM, ANTTP.

Prerequisite. NS-2150, and ALZ-3502

External Syllabus Support. USMC MMT, MWSS, EAF or USAF Combat Control Team with appropriate expeditionary airfield ALZ Marking/Lighting and ARFF Support.

### 3. Cargo and Passenger Loading (CPL)

- a. Purpose. Continue the Crewmaster's CPL instruction.

b. General

(1) Preflight and configure an aircraft per mission requirements for flights involving passengers and/or cargo.

(2) Determine available seating and/or cargo space for load planning purposes.

(3) Utilize all KC-130 loading aids conforming to the limitations, installations, and usage of each PER NAVAIR 01-75GAA-9.

(4) Safely load and off-load cargo per NAVAIR 01-75GAA-9.

(5) Compute weight and balance for a flight transporting a passenger/cargo payload.

(6) Postflight cargo compartment.

c. Crew Requirements. CPLI or LMI.

CPL-3510	3.0	365	B,SC,R	1 KC-130T	A	(N)
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Goal. Qualify or maintain proficiency in loading passengers with bags.

Requirement. The Crewmaster will configure an aircraft for a flight transporting passengers and baggage.

Performance Standard. Per the NFM, NAVAIR 01-75GAA-9, and OPNAVINST 3710.7\_.

Prerequisite. (NS-2150).

CPL-3511	3.0	365	B,SC,R	1 KC-130T	A	(N)
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Goal. Qualify or maintain proficiency in loading rolling stock.

Requirement. The Crewmaster will configure an aircraft for a flight transporting rolling stock.

Performance Standard. Per the NFM, NAVAIR 01-75GAA-9, and OPNAVINST 3710.7\_.

Prerequisite. (NS-2150).

CPL-3512	3.0	365	B,SC,R	1 KC-130T	A	(N)
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Goal. Qualify or maintain proficiency in loading palletized cargo.

Requirement. The Crewmaster will configure and load an aircraft for a flight transporting palletized cargo. The Crewmaster shall utilize the cargo handling system to include preflight.

Performance Standard. Per the NFM, and NAVAIR 01-75GAA-9 and OPNAVINST 3710.7\_.

Prerequisite. (NS-2150).

CPL-3513	3.0	365	B,SC,R	1 KC-130T	A	(N)
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Goal. Qualify or maintain proficiency in loading hazardous cargo.

Requirement. The Crewmaster will configure an aircraft for a flight transporting hazardous cargo IAW MCO P4030.19\_.

Performance Standard. Per the NFM, NAVAIR 01-75GAA-9, and OPNAVINST 3710.7\_, and MCO P4030.19\_.

Prerequisite. (NS-2150).

#### 4. Air to Air Refueling (AAR)

a. Purpose. Continue instruction in AAR observer duties, or to maintain proficiency during day and night tactical refueling missions.

b. General. Emission control procedures may be used for any of the events in this stage.

c. Crew Requirement. FAMI, FEI, or LMI depending on event.

d. Academic Training. Review NFM, ATP-56B, ANTP, and MAWTS-1 AAR ASP.

AAR-3600	2.0	365	B	1 KC-130T	A	D
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Goal. Qualify or maintain proficiency in AAR observer duties for Fixed Wing (FW) or Tilt Rotor (TR) AAR.

Requirement. The CMUI, under the direct supervision of a FEI, or LMI, shall perform AAR observer duties during FW or TR refueling mission.

Performance Standard. Satisfactory completion of the procedures per the NFM, ATP-56B, and ANTP.

External Syllabus Support. Receiver aircraft.

AAR-3601	2.0	365	B	1 KC-130T	A	D
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Goal. Qualify or maintain proficiency in AAR observer duties for Helicopter AAR.

Requirement. The CMUI, under the direct supervision of a FEI, or LMI, shall perform AAR observer duties during RW refueling mission.

Performance Standard. Satisfactory completion of the procedures per the NFM, ATP-56B, and ANTP.

External Syllabus Support. Receiver aircraft.

AAR-3650	2.0	365	B,R	1 KC-130T	A	NS
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Goal. Qualify or maintain proficiency in AAR observer duties using NVDs during AAR.

Requirement. The CMUI, under the direct supervision of a FEI, or LMI, shall perform AAR observer duties using NVDs.

Performance Standard. Satisfactory completion of the procedures per the NFM, ATP-56B, and ANTP.

Prerequisite. NS-2150, AAR-3600, AAR-3601

External Syllabus Support. Receiver aircraft.

## 5. Rapid Ground Refueling (RGR)

a. Purpose. Qualify or maintain proficiency in RGR missions.

b. Academic Training. Review ANTP RGR procedures and MAWTS-1 RGR ASP.

RGR-3661	2.0	365	B	1 KC-130T	A	D
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Goal. Qualify or maintain currency in RGR point man duties during day RGR operations.

Requirement. The CMUI, under the direct supervision of a LMI RS, will assist the RS in the conduct of a day RGR, minimum 2-point setup, including the actual transfer of fuel to aircraft or tactical ground vehicles (TGV). The CMUI will man and perform all duties associated with a refueling point a RGR mission.

Performance Standard. Satisfactorily complete the procedures per NFM and ANTP.

External Syllabus Support. AAFR; aircraft or TGV.

RGR-3651	2.0	365	B,R	1 KC-130T	A	NS
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Goal. Qualify or maintain currency in RGR point man duties during night RGR operations.

Requirement. The CMUI, under the direct supervision of a LMI RS, will assist the RS in the conduct of a NS RGR, minimum 2-point setup, including the actual transfer of fuel to aircraft or tactical ground vehicles (TGV). The CMUI will man and perform all point man duties associated with a RGR mission using NVDs. A qualified NS RS may provide initial instruction for this event.

Performance Standard. Satisfactory completion of the procedures per the NFM, ANTP.

Prerequisite. NS-2150, RGR-3661

External Syllabus Support. AAFR; aircraft or TGV.

6. Air Delivery (AD)

a. Purpose. Qualify or maintain proficiency in Container Delivery System (CDS), Heavy Equipment (HE), and Personnel (PERS) AD missions.

b. Crew requirement. LMI or ADI.

c. Academic Training. Review the NATOPS Flight Manual, NAVAIR 01-75GAA-9, ANTP, MAWTS-1 AD ASP.

AD-3702	4.0	180	B,SC,R	1 KC-130T	A	(N)
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Goal. Qualify or maintain proficiency in CDS AD.

Requirement. The CMUI, under the direct supervision of an ADI or LMI, will conduct a CDS AD. The CMUI will perform preflight, rigging, briefing, loading, execution, and emergency procedures.

Performance Standard. Satisfactory completion of the procedures per the NFM, NAVAIR 01-75GAA-9, ANTP.

Prerequisite. Applicable MAWTS-1 ASP's, CPL-3512, (NS-2150)

External syllabus. AD platoon, MHE, and DZ control.

AD-3703	4.0	180	B,SC,R	1 KC-130T	A	(N)
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Goal. Qualify or maintain proficiency in HE AD.

Requirement. The CMUI, under the direct supervision of an ADI or LMI, will conduct a HE AD. The CMUI will perform preflight, rigging, briefing, loading, execution, and emergency procedures.

Performance Standard. Satisfactory completion of the procedures per the NFM, NAVAIR 01-75GAA-9, ANTP.

Prerequisite. Applicable MAWTS-1 ASP's, CPL-3512, (NS-2150).

External Syllabus Support. AD platoon, MHE, DZ control.

AD-3704	4.0	180	B,SC,R	1 KC-130T	A	(N)
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Goal. Introduce and qualify, or maintain proficiency in static line PERS AD.

Requirement. The CMUI, under the direct supervision of an ADI or LMI, will perform a static PERS AD. The CMUI will perform preflight, rigging, briefing, loading, execution, and emergency procedures.

Performance Standard. Satisfactory completion of the procedures per the NFM, NAVAIR 01-75GAA-9, ANTP.

Prerequisite. Applicable MAWTS-1 ASP's, CPL-3510, (NS-2150).

External Syllabus Support. Parachutists, DZ control, and Flight Physiologist (as required).

710. CORE PLUS PHASE

1. General

a. Upon completion of this phase of training, the Crewmaster will be qualified in Core Plus Skills. These skills include, Defensive Tactics (DT), Air Delivery (AD), and Battlefield Illumination (BI). When the Crewmaster has completed the RQD-6118 and subsequent initial events have been successfully accomplished the Crewmaster is qualified in that event.

b. Stages. Defensive Tactics, Air Delivery, and Battlefield Illumination.

3. Defensive Tactics (DT)

c. Purpose. Introduce and qualify the Crewmaster or maintain proficiency in DT during air-to-air engagements by combining maneuvering and use of the ASE suite.

d. General. The following equipment should be used to complete the event.

- (1) Fully operational ASE suite.
- (2) Appropriate chaff and decoy flares.
- (3) Rear Vision Device (RVD).

e. Academic Training. Prior to DT stage training the Crewmaster shall receive:

- (1) MAWTS-1 ASP course on KC-130 Specific Threat Counter Tactics.
- (2) MAWTS-1 ASP course on KC-130T ASE equipment.

DT-4411	2.0	365	B,R	1 KC-130T	A	D
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Goal. Introduce, qualify, or maintain proficiency in the duties of an aft or RVD lookout, during a DT mission.

Requirement. The CMUI, under the direct supervision of a WTI, will perform the duties of an aft or RVD lookout during a DT flight. The CMUI will conduct cargo compartment preparation, crew briefing, lookout doctrine, scan for airborne threats, threat maneuvering calls and terrain clearance, crew coordination and combat entry/exit checklists.

Performance Standard. Per the NFM and ANTTP.

Prerequisite. LAT-2261

Ordinance. Appropriate chaff and decoy flare load.

External syllabus. Appropriate aggressor aircraft.

4. Air Delivery (AD)

a. Purpose. Introduce, qualify, or maintain proficiency in Crewmaster duties during an air delivery mission.

b. Academic Training. Review the NATOPS Flight Manual, NAVAIR 01-75GAA-9, ANTP, MAWTS-1 Air Delivery course ware.

AD-4700	2.0	180	B,SC,R	1 KC-130T	A	(N)
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Goal. Introduce, qualify, or to maintain proficiency in personnel and cargo combination airdrop.

Requirement. The CMUI, under the direct supervision of an ADI or LMI, will perform the duties as primary Crewmaster during a combination airdrop. The CMUI will perform preflight, rigging, briefing, loading, and execution and emergency procedures.

Performance Standard. Satisfactory completion of the procedures per the NFM, NAVAIR 01-75GAA-9, ANTP.

Prerequisite. (NS-2150, CPL-3512, AD-3700, AD-3701), AD-3702

External support. Parachutists, AD Platoon, MHE, DZ control, and Flight Physiologist (as required).

AD-4701	2.0	365	B,SC,R	1 KC-130T	A	(N)
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Goal. Introduce, qualify, or to maintain proficiency in airdrop of military free fall (MFF)/high altitude airdrop personnel.

Requirement. The CMUI, under the direct supervision of an ADI or LMI, will conduct MFF. The CMUI will preflight, rig, brief, load, and execute a free fall airdrop. The initial event shall utilize the oxygen system and pre-breathing procedures.

Performance Standard. Satisfactory completion of the procedures per the NFM, ANTP.

Prerequisite. (NS-2150)

External Support. MFF parachutists, DZ control, and Flight Physiologist (as required).

5. Battlefield Illumination (BI)

a. Purpose. Introduce, qualify, or maintain proficiency in flare delivery procedures.

b. Academic Training. MAWTS-1 Battlefield Illumination ASP.

BI-4710	3.0	365	B/SC,R	1 KC-130T	A	(N)
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Goal. Introduce, qualify, or maintain proficiency in battlefield illumination as a Team Member/Team Leader.

Requirement. The CMUI, under the direct supervision of a QASO, will demonstrate the loading and operation of the flare dispenser. The CMUI will adhere to crew coordination, safety precautions and emergency procedures.

Performance Standard. Per the NFM, NAVAIR 01-75GAA-9, and ANTPP.

Prerequisite. (NS-2150)

Ordinance. LUU-2 and/or LUU-19 Series APFs are required for initial event.

711. INSTRUCTOR TRAINING PHASE

1. Instructor Stage Training

a. Purpose. Qualify as a Familiarization Instructor (FAMI), Cargo Passenger Loading Instructor (CPLI), Airdrop Instructor (ADI), and Loadmaster Instructor (LMI).

b. General. Standardization will be emphasized throughout Instructor training.

c. Academic Training. CBT's.

IUT-5100	3.0	*	1 KC-130T	A	(N)
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Goal. Initial Instructor training.

Requirement. The IUT will demonstrate the ability to instruct a CMUI on the KC130T. The IUT will demonstrate the ability to correct common CMUI errors. The IUT will apply standardized instructional techniques and be instructed by a NI/ANI.

Performance Standard. IAW NATOPS and applicable publications.

Prerequisite. 750 hours, APRB recommended, CBT complete, and the CM IUT should complete BITC before the completion of this POI.

IUT-5101	3.0	*	1 KC-130T	A	(N)
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Goal. Continued Instructor training.

Requirement. The IUT will demonstrate the ability to instruct a CMUI on the KC130T. The IUT will demonstrate the ability to correct common CMUI errors. The IUT will apply standardized instructional techniques and be instructed by a NI/ANI.

Performance Standard. IAW NATOPS and applicable publications.

Prerequisite. CMI-5100

CPLI-5102	3.0	*	1 KC-130T	A	(N)
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Goal. Cargo Passenger Loading Instructor.



Requirement. The IUT will demonstrate the ability to instruct a CMUI on CPL and COL events. The IUT will demonstrate the ability to correct common CMUI errors. The CM IUT will apply standardized instructional techniques and be evaluated by a CM NI/ANI or LM NI/ANI.

Performance Standard. IAW NATOPS and applicable publications.

Prerequisite. 750 hours in TMS, APRB recommended, IUT-5101,

FAMI-5103	3.0	*		1 KC-130T	A	(N)
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Goal. Familiarization Instructor.

Requirement. The IUT will demonstrate the ability to instruct a CMUI on Familiarization events, AR observer events, TN events. The IUT will demonstrate the ability to correct common CMUI errors. The CM IUT will apply standardized instructional techniques and be evaluated by a CM NI/ANI or LM NI/ANI.

Performance Standard. IAW NATOPS and applicable publications.

Prerequisite. 750 hours, APRB recommended, IUT-5101

ADI-5700	3.0	*		1 KC-130T	A	(N)
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Goal. Airdrop Instructor.

Requirement. The IUT will demonstrate the ability to instruct a CMUI on AD's, and correct common CMUI errors. The CM IUT will apply standardized instructional techniques and be evaluated by a CM NI/ANI or LM NI/ANI.

Performance Standard. IAW NATOPS and applicable publications.

Prerequisite. 1000 hours, APRB recommended, IUT-5101

## 2. NATOPS Instructor Training

a. Purpose. Qualify as a NATOPS Instructor/Assistant NATOPS Instructor (NI/ANI).

b. General. Standardization will be emphasized throughout Instructor training.

c. Academic Training. Use academic courseware as outlined in the NFM and OPNAV 3710.7\_.

NI-5140	2.0	365	E	1 KC-130T	A	(N)
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Goal. NI/ANI Training flight.

Requirement. ANI/NI will evaluate a Crewmaster in NATOPS procedures under supervision of a NE/NI. At the completion of this sortie, the Crewmaster may be designated by the Commanding Officer.

Performance Standard. IAW NFM and OPNAVINST 3710.7\_.

Prerequisite. 1500 hours, APRB recommended, IUT-5101.

NI-5141	2.0	365	E	1 KC-130T	A	(N)
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Goal. NI/ANI Evaluation flight.

Requirement. NI/ANI will evaluate a Crewmaster in NATOPS procedures under supervision of a NE/NI. At the completion of this sortie, the Crewmaster may be designated by the Commanding Officer.

Performance Standard. IAW NFM and OPNAVINST 3710.7\_.

Prerequisite. 1500 hours, APRB recommended, IUT-5140.

### 3. Night Systems Instructor Training

a. Purpose. Qualify as a Night Systems Instructor (NSI).

b. General. Standardization will be emphasized throughout Instructor training. MAWTS1 Instructor shall evaluate this event and workups may be conducted by squadron NSI's.

c. Academic Training. Use academic courseware as outlined in the NFM and the MAWTS-1 KC-130T Course Catalog.

NS-5150	3.0	*		1 KC-130T	A	NS
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Goal. Begin Night Systems Instructor syllabus.

Requirement. IUT will demonstrate the ability to instruct a crewmember in NS Core Skill T&R events and correct common CMUI errors. The IUT will apply standardized instructional techniques.

Performance Standard. IAW MAWTS-1 KC-130T Course Catalog.

Prerequisite. IAW MAWTS-1 KC-130T Course Catalog, NS-2150

NS-5151	3.0	*		1 KC-130T	A	NS
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Goal. Continue Night Systems Instructor syllabus.

Requirement. IUT will demonstrate the ability to instruct a crewmember in NS Mission Skill T&R events and demonstrate the ability to correct common CMUI errors. The IUT will apply standardized instructional techniques

Performance Standard. IAW MAWTS-1 KC-130T Course Catalog.

Prerequisite. NS-5150

NS-5152	2.0	*	E	1 KC-130T	A	NS
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Goal. NSI Certification.

Requirement. Per MAWTS-1 KC-130T Course Catalog. Upon certification by MAWTS-1, the NSI designation shall be assigned by the Squadron Commanding Officer.

Performance Standard. Satisfactorily execute the procedures per NFM, ANTP, and MAWTS-1 ASP for NSI.

Prerequisite. NS-5151

External Syllabus Support. MAWTS-1 Instructor

#### 4. Weapons and Tactics Instructor (WTI)

a. Purpose. Certify the KC-130 Crewmaster Instructor as a WTI capable of safely conducting ground and airborne instruction in the KC-130 Crewmaster Core Skill Advanced and Core Skill Plus flight syllabus as outlined in MCO 3500.19 and the MAWTS-1 WTI Course Catalog.

b. General. The KC-130 WTI Syllabus is developed by MAWTS-1 and is conducted in conjunction with the WTI Course. Upon graduation, the candidate will be certified by MAWTS-1 as a WTI Crewmaster. WTI designation can only be made by the squadron commanding officer.

c. Ground Training. As published in the MAWTS-1 WTI Course Catalog.

d. Flight Training. As published in the MAWTS-1 WTI Course Catalog.

WTI-5999	*	1 KC-130T	A	NS
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Goal. Develop highly qualified Crewmasters into effective unit tactics instructors and expose them to current Marine Corps tactical doctrine. Additionally, this stage is designed to increase knowledge and experience of the capabilities and associated task of the KC-130.

Requirement. Per MAWTS-1 KC-130T Course Catalog. Upon certification by MAWTS-1, the WTI designation may be assigned by the Squadron Commanding Officer.

Performance Standard. Satisfactorily execute the procedures per NFM, ANTP, and MAWTS-1 Course Catalog.

Prerequisite. MAWTS-1 Course Catalog

External Syllabus Support. MAWTS-1 Instructor

#### 712. REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, DESIGNATIONS (RQD) PHASE

1. Purpose. Track NATOPS Qualifications.

2. General. "E"-coded sorties in the 6000-level phase may be logged in conjunction with any sortie that completes its stage. CSP is not awarded for these 6000 level sorties; however, CSP credit may be obtained by logging the appropriate training code(s) in the 2000-4000 level syllabi. Once the flight to attain the qualification/designation is complete, a letter from the

squadron commanding officer awarding the qualification/designation shall be placed in the NATOPS and APR before that qualification/designation can be used.

3. Stages. Systems Review, Academic Evaluation, Functional Check Flight Qualification, QASO Battlefield Illumination and NATOPS Evaluations and designations.

4. KC-130T NATOPS Evaluation POI

a. Purpose. To evaluate the Crewmaster's knowledge of aircraft systems, performance limitations, emergency procedures, and flight and ground operations.

b. General

(1) NATOPS Instructors shall conduct the NATOPS evaluation in accordance with OPNAVINST 3710.7 series and other applicable directives, instructions, and orders.

(2) The NATOPS Instructor shall utilize the NATOPS Model Manager generated NATOPS Aviation Training Form (ATF) and the evaluation metrics required for the accomplishment and performance of the standardized criterion to determine whether the Crewmaster completed the sortie. Prior to the oral examination, the NATOPS Instructor shall review the NATOPS monthly emergency procedures examinations for the previous twelve (12) months and previous NATOPS evaluations. At the discretion of the squadron commanding officer, a letter designating the Crewmaster as NATOPS qualified shall be placed in the NATOPS jacket.

(3) NATOPS Evaluatees shall complete and have a graded open book, closed book, and oral examination prior to the commencement of the actual NATOPS evaluation event.

NTPS-6012	3.0	365	B,SC,R	E
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Goal. NATOPS open book exam.

Requirement. Crewmaster will complete a NATOPS open book examination.

Performance Standard. Per NATOPS.

Prerequisite. 1000 Phase complete.

NTPS-6013	1.0	365	B,SC,R	E
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Goal. NATOPS closed book exam.

Requirement. Crewmaster will complete a NATOPS closed book examination.

Performance Standard. Per NATOPS.

Prerequisite. 1000 Phase complete.

NTPS-6014    3.0    365            B,SC,R    E

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Goal.    NATOPS oral exam.

Requirement.    Crewmaster will complete a NATOPS oral examination.

Performance Standard.    Per NATOPS.

Prerequisites.    1000 Phase complete.

6. Right Seat Taxi Observer

a. Purpose.    Train the Crewmaster in right seat taxi observer procedures. This stage does not require flight time, but does require the use of a KC-130T aircraft for the indicated time.

b. General.    This phase of instruction shall be instructed by a Basic Instructor Pilot or FEI.

c. Ground/Academic Training.    The student will be familiar with aircraft taxi operations, squadron SOP, and the local course rules.

RSTO-6015    2.0    \*    B,SC            1 KC-130T            A            (N)

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Goal.    Introduce right seat taxi observer procedures.

Requirement.    Introduce right seat taxi observer procedures and emergency procedures as applicable to the copilot seat during engine start and taxi.

Performance Standard.    IAW NFM, OPNAV 3710.7\_, and local course rules.

Prerequisite.    CM1 (NTPS-6118).

RSTO-6016    1.0    \*    B,SC,R            1 KC-130T            A            (N)

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Goal.    Refine right seat taxi observer procedures.

Requirement.    Refine and qualify the CMUI in right seat taxi observer procedures and emergency procedures as applicable to the copilot seat during engine start and taxi.

Performance Standard.    Qualified per NFM, OPNAV 3710.7\_ and local course rules.

Prerequisite.    CM1 (NTPS-6118), RSTO-6015.

7. Functional Check Flight (FCF)

a. Purpose.    To continue instruction and maintain proficiency in FCF procedures. Perform all FCF procedures IAW NATOPS, 4790.2, and OPNAV 3710.7\_.

b. General.    This phase of training shall be instructed by a FEI.

c. Ground/Academic Training. The CMUI will be familiar with FCF procedures.

FCF-6106	2.0	365	B,SC,R	1 KC-130T	A	D
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Goal. To introduce, qualify, and maintain currency for CMUI in partial FCF Flight Profile A, B, C, D, or E.

Requirement. To conduct a FCF coordinating and documenting all the requirements of the MIMS, NATOPS, SOP, and 4790.

Performance Standard. Per the NFM, OPNAVINST 3710.7\_\_, and OPNNAVINST 4790.2\_\_.

Prerequisite. NTPS-6118

8. NATOPS Evaluation (NTPS). Purpose. To conduct an initial or annual NATOPS check.

NTPS-6118	4.0	365	B,SC,R	E 1 KC-130T	A	(N)
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Goal. Crewmaster NATOPS evaluation.

Requirement. The ANI or NI/NE will evaluate CM per NATOPS.

Performance Standard. Per NFM.

Prerequisite. 1000 phase complete, 50 KC-130T flight hours.

#### 9. Rapid Ground Refueling (RGR)

a. Purpose. Qualify or maintain proficiency as a Refueling Supervisor (RS) on RGR missions.

b. General. Upon completion of these events the Crewmaster will be designated by the Commanding Officer as a Refueling Supervisor.

c. Academic Training. Review ANTPP RGR procedures and MAWTS-1 RGR ASP.

RGR-6662	2.0	180	B,SC	1 KC-130T	A	D
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Goal. Introduce, qualify, or maintain proficiency for day RGR RS.

Requirement. The Crewmaster will plan, brief, and execute a daytime RGR, minimum 2 point setup, including an actual transfer of fuel to aircraft or TGV. This code will be instructed by a LMI or WTI.

Performance Standard. Satisfactory completion of the procedures per the NFM, ANTPP.

Prerequisites. RGR-3661 and completion of taxi director course.

External Syllabus Support. AARF, and aircraft or TGV.

RGR-6652	2.0	180	B,SC,R	1 KC-130T	A	NS
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Goal. Introduce and qualify, or maintain proficiency for NS RGR RS.

Requirement. The Crewmaster will plan, brief, and execute a NS RGR, minimum 2 point setup, including an actual transfer of fuel to aircraft or TGV. This code will be instructed by a LMI or WTI.

Performance Standard. Satisfactory completion of the procedures per the NFM, ANTTP.

Prerequisite. NS-2150, RGR-3651

External Syllabus Support. AARF, and aircraft or TGV.

10. Battlefield Illumination (BI)

a. Purpose. Introduce, qualify, or maintain proficiency in flare delivery procedures as the Quality Assurance Safety Officer (QASO).

b. Academic Training. MAWTS-1 Battlefield Illumination ASP.

BI-6653	3.0	180	B,SC,R	1 KC-130T	A	(N)
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Goal. Introduce, qualify, or maintain proficiency in battlefield illumination as a QASO.

Requirement. The CM will supervise the loading and operation of the flare dispenser. The CM will adhere to crew coordination and, safety precautions while performing duties of a QASO, as defined in the ANTTP. Initial instruction will be conducted by a LMI or WTI.

Performance Standard. Per the NFM, NAVAIR 01-75GAA-9, and ANTTP

Prerequisites. (NS-2150), BI-4710.

Ordinance. Minimum 14 LUU-2 and/or LUU-19 Series APFs are required for initial event.

External Support. Ordnance Qualified Personnel.

713. T&R SYLLABUS MATRICES

KC-130T Crewmaster											
1000 CORE SKILL INTRODUCTION											
STAGE	TRNG CODE	EVENT DESC	ACADEMIC/GRND HOURS	FLT/LIVE HOURS	SIM HOURS	REFLY INTVL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI
FAMILIARIZATION (FAM)											
FAM	1000	Sqdn, A/C & EP Ground Fam	-	-	4.0	*	S/A	-	D	-	B,SC
FAM	1100	Pre-flight Intro & WT & BAL	-	-	4.0	*	A/S	-	D	1000	B,SC
FAM	1101	Pre-Flight,& WT & BAL	-	-	4.0	*	A/S	-	D	1100	B,SC
FAM	1102	Engine Systems	-	4.0	-	*	A	1	(N)	1100	B,SC
FAM	1103	Prop Systems	-	4.0	-	*	A	1	(N)	1100	B,SC
FAM	1104	AC/DC System	-	4.0	-	*	A	1	(N)	1100	B,SC
FAM	1105	Air Conditioner, O2Bleed Air System	-	4.0	-	*	A	1	(N)	1100	B,SC
FAM	1106	Fuel Systems	-	4.0	-	*	A	1	(N)	1100	B,SC
FAM	1107	Hydraulic Systems	-	4.0	-	*	A	1	(N)	1100	B,SC
FAM	1108	Comm Nav, & HF Radios,	-	4.0	-	*	A	1	(N)	1100	B,SC
			-	28.0	12.0						



NIGHT SYSTEMS (NS)											
NS	1150	NS HLL FAM	-	-	2.0	*	S/A	1	NS	NVD I/II + NITE LAB	B
NS	1151	NS LLL FAM	-	-	2.0	*	S/A	1	NS	1150	B
			-	0.0	4.0						
TACTICAL NAVIGATION (TN)											
TN	1200	TN INTRO	-	2.0	-	*	A	-	D	1101	B
			-	2.0	0.0						
CARGO AND PASSENGER LOADING (CPL)											
CPL	1510	PAX/BAGS	-	-	4.0	*	S/A	-	(N)	-	B,SC
CPL	1511	ROLLING STOCK	-	-	4.0	*	S/A	-	(N)	-	B,SC
CPL	1512	PALLETIZED CARGO	-	-	4.0	*	S/A	-	(N)	-	B,SC
CPL	1513	ROLLING STOCK	-	4.0	-	*	A	1	(N)	1101	B,SC
CPL	1514	PALLETIZED CARGO	-	4.0	-	*	A	1	(N)	1101	B,SC
CPL	1515	MIXED PAX/BAGS/CARGO	-	4.0	-	*	A	1	(N)	1101,1 510,15 11,151 2,1514	B,SC
			-	12.0	12.0						
AIR TO AIR REFUELING (AAR)											
AAR	1600	FW/TR AAR	-	2.0	-	*	A	1	D	1100	B
AAR	1601	HELICOPTER AAR	-	2.0	-	*	A	1	D	1100	B
AAR	1602	AR CHECK	-	2.0	-	*	A	1	D	1101,1 600 1601	B,SC
			-	6.0	0.0						
TOTALS		FLT HRS	-	48.0	28.0	SIM HOURS					

KC-130T Crewmaster												
2000 CORE SKILL												
STAGE	TRNG CODE	EVENT DESC	FLT/LIVE HOURS	SIM HOURS	REFLY INTVL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVAL	CHAINING
NIGHT SYSTEMS (NS)												
NS	2150	NS QUAL	2.0	-	365	A	1	NS	-	B,SC,R		-
			2.0	0.0								
LONG RANGE NAVIGATION (LRN)												
LRN	2162	LR NAV	6.0	-	730	A	1	(N)	-	B,SC,R	-	-
			6.0	0.0								
TACTICAL NAVIGATION (TN)												
TN	2201	DAY TN	2.0	-	365	A	1	D	-	B	-	-
TN	2250	NS TN	2.0	-	365	A	1	NS	2150,2201	B,R	-	2150,2201
			4.0	0.0								
LOW ALTITUDE TACTICS (LAT)												
LAT	2261	DAY LAT	2.0	-	365	A	1	D	2201	B,R	-	2201
			2.0	0.0								
THREAT REACTION (TR)												
TR	2400	THREAT REACTION	2.0	-	365	A	1	(N)	(2150),2261	B,R	-	(2150)
			2.0	0.0								
TOTALS		FLT HRS	16.0	0.0	SIM HOURS							

KC-130T Crewmaster												
3000 MISSION SKILL												
STAGE	TRNG CODE	EVENT DESC	FLT/LIVE HOURS	SIM HOURS	REFLY INTVL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVAL	CHAINING
ASSAULT LANDING ZONE (ALZ)												
ALZ	3502	COL	1.0	-	365	A	1	(N)	(2150), 3512	B, SC, R	-	(2150)
ALZ	3503	DAY ALZ A/C PREP	1.0	-	365	A	1	D	(2150)	B, SC, R	-	
ALZ	3504	ERO	1.0	-	365	A	1	(N)	(2150)	B, SC, R	-	(2150)
ALZ	3550	NS ALZ	1.0	-	365	A	1	(N)	(2150), 3502	B, SC, R	-	(2150), 3503
			4.0	0.0								
CARGO AND PASSENGER LOADING (CPL)												
CPL	3510	PASSENGERS AND BAGS	3.0	-	365	A	1	(N)	(2150)	B, SC, R	-	(2150)
CPL	3511	ROLLING STOCK	3.0	-	365	A	1	(N)	(2150)	B, SC, R	-	(2150)
CPL	3512	PALLETIZED CARGO	3.0	-	365	A	1	(N)	(2150)	B, SC, R	-	(2150)
CPL	3513	HAZMAT	3.0	-	365	A	1	(N)	(2150)	B, SC, R	-	-
			12.0	0.0								
AIR-TO-AIR REFUELING (AAR)												
AAR	3600	FW/TR AAR	2.0	-	365	A	1	D	-	B	-	-
AAR	3601	HAAR	2.0	-	365	A	1	D	-	B	-	3600
AAR	3650	NS AAR	2.0	-	365	A	1	NS	2150, 3600, 3601	B, R	-	2150, (3600, 3601)
			6.0	0.0								
RAPID GROUND REFUELING (RGR)												
RGR	3661	DAY POINTMAN	2.0	-	365	A	1	D	-	B	-	-
RGR	3651	NS POINTMAN	2.0	-	365	A	1	NS	2150, 3661	B, R		2150, 3661
			4.0	0.0								
AIR DELIVERY (AD)												
AD	3702	CDS AD	4.0	-	180	A	1	(N)	(2150), 3512	B, SC, R	-	(2150), 3512
AD	3703	HE AD	4.0	-	180	A	1	(N)	(2150), 3512	B, SC, R	-	(2150), 3512
AD	3704	PERS STATIC LINE AD	4.0	-	180	A	1	(N)	(2150), 3510	B, SC, R	-	(2150), 3510
			12.0	0.0								
TOTALS		FLT HRS	38.0	0.0	SIM HOURS							

KC-130T Crewmaster												
4000 CORE PLUS												
STAGE	TRNG CODE	EVENT DESC	FLT/LIVE HOURS	SIM HOURS	REFLY INTVL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVAL	CHAINING
DEFENSIVE TACTICS (DT)												
DT	4411	DT RVD	2.0	-	365	A	1	D	2261	B,R	-	2201,2261
			2.0	0.0								
AIR DELIVERY (AD)												
AD	4700	COMBO AD	2.0	-	180	A	1	(N)	(2150,3512,3700,3701),3702	B,SC,R	-	(2150,3702 3703,3704),3512
AD	4701	MILITARY FREE FALL	2.0	-	365	A	1	(N)	(2150)	B,SC,R	-	(2150)
			4.0	0.0								
BATTLEFIELD ILLUMINATION (BI)												
BI	4710	TM / TL	3.0	-	365	A	1	(N)	(2150)	B,SC,R	-	(2150),3512,.3513
			3.0	0.0								
TOTALS		FLT HRS	9.0	0.0	SIM HOURS							

KC-130T Crewmaster												
5000 INSTRUCTOR TRAINING												
STAGE	TRNG CODE	EVENT DESC	FLT/LIVE HOURS	SIM HOURS	REFLY INTVL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVAL	CHAINING
INSTRUCTOR UNDER TRAINING (IUT)												
IUT	5100	INSTRUCTOR UNDER TRAINING	3.0	-	*	A	1	(N)	750 HOURS , APRB REC. ,CBT COMPLETE	-	-	-
IUT	5101	INSTRUCTOR UNDER TRAINING	3.0	-	*	A	1	(N)	5100	-	-	-
			6.0	0.0								
CARGO/PASSENGER INSTRUCTOR (CPLI)												
CPLI	5102	CARGO/PASSENGER STAGE INSTRUCTOR	3.0	-	*	A	1	(N)	750 TMS HOURS ,5101	-	-	-
			3.0	0.0								
FAM INSTRUCTOR (FAMI)												
FAMI	5103	FAM STAGE INSTRUCTOR	3.0	-	*	A	1	(N)	750 TMS HOURS ,APRB REC. ,5101	-	-	-
			3.0	0.0								
AIR DELIVERY INSTRUCTOR (ADI)												
ADI	5700	AIR DELIVERY STAGE INSTRUCTOR	3.0	-	*	A	1	(N)	1000 TMS HOURS ,APRB REC. ,5101	-	-	-
			3.0	0.0								
NATOPS/ASSISTANT NATOPS INSTRUCTOR (NI/ANI)												
NI	5140	NI/ANI TRAINING	2.0	-	365	A	1	(N)	1500 HOURS ,APRB REC. ,5101	-	E	-
NI	5141	NI/ANI CHECK	2.0	-	365	A	1	(N)	1500 HOURS ,APRB REC. ,5140	-	E	-
			4.0	0.0								
MAWTS-1 INSTRUCTOR POIs												
NS	5150	NSI TRAINING 1	3.0	-	*	A	1	NS	2150 ,5102 ,6118	-	-	-
NS	5151	NSI TRAINING 2	3.0	-	*	A	1	NS	5150	-	-	-
NS	5152	NSI CERTIFICATION	2.0	-	*	A	1	NS	5151	-	E	-
WTI	5999	WTI INSTRUCTOR	*	-	*	A	1	NS	MAWTS-1	-	-	-
			8.0	-								
TOTALS		FLT HRS	27.0	0.0	SIM HOURS							

KC-130T Crewmaster												
6000 REQUIREMENTS, QUALIFICATIONS, AND DESIGNATIONS												
STAGE	TRNG CODE	EVENT DESC	ACADEMIC HOURS	FLT/LIVE HOURS	REFLY INTVL	DEVICE	# OF A/C	CONDITIONS	PREREQ	POI	EVAL	CHAINING
ACADEMIC EVALUATION												
NTPS	6012	NTPS OPEN BOOK EXAM	3.0	-	365	-	-	-	1000 complete	B,SC,R	E	-
NTPS	6013	NTPS CLOSED BOOK EXAM	1.0	-	365	-	-	-	1000 complete	B,SC,R	E	-
NTPS	6014	NTPS ORAL EXAM	3.0	-	365	-	-	-	1000 complete	B,SC,R	E	-
			7.0	0.0								
RIGHT SEAT TAXI OBSERVER												
RSTO	6015	RIGHT SEAT TAXI OBSERVER INTRO	-	2.0	*	A	1	(N)	(6118)	B,SC	-	-
RSTO	6016	RIGHT SEAT TAXI OBSERVER	-	1.0	*	A	1	(N)	6015,(6118)	B,SC,R	-	-
FCF												
FCF	6106	FULL FCF QUAL	0.0	2.0	365	A	1	D	6118	B,SC,R	-	-
			0.0	2.0								
NATOPS CHECK												
NTPS	6118	NATOPS	0.0	4.0	365	A	1	(N)	1000 Complete	B,SC,R	E	-
			0.0	4.0								
REFUELING SUPERVISOR												
RS	6662	DAY RS	0.0	2.0	180	A	1	D	3661	B,SC		3661
RS	6652	NS RS	0.0	2.0	180	A	1	NS	2150,3651	B,SC,R		2150,3651,3661
			0.0	4.0								
BATTLEFIELD ILLUMINATION												
QASO	6653	QASO	0.0	3.0	180	A	1	N	(2150),4710	B,SC,R		(2150)4710
			0.0	3.0								
TOTALS			7.0	16.0								

714. SYLLABUS EVALUATION FORMS. These forms are maintained on the MAWTS-1 website and can be downloaded from that location.